



## SEQUENCE LISTING

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#7  
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TECH CENTER 1600/2900

<120> LOCI FOR IDIOPATHIC GENERALIZED EPILEPSY, MUTATIONS  
THEREOF AND METHOD USING SAME TO ASSESS, DIAGNOSE,  
PROGNOSE OR OR TREAT EPILEPSY

<130> GOUD:023

<150> 09/167,623

<151> 2000-11-24

<140> PCT/CA00/01404

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<140? 60/167,623

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<170> PatentIn Ver. 2.1

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Met Ser Leu Pro Ala Leu Phe Asn Ile Gly Leu Leu Leu Phe Leu Val	1665	1670	1675
Met Phe Ile Tyr Ala Ile Phe Gly Met Ser Asn Phe Ala Tyr Val Lys	1685	1690	1695
Arg Glu Val Gly Ile Asp Asp Met Phe Asn Phe Glu Thr Phe Gly Asn	1700	1705	1710
Ser Met Ile Cys Leu Phe Gln Ile Thr Thr Ser Ala Gly Trp Asp Gly	1715	1720	1725
Leu Leu Ala Pro Ile Leu Asn Ser Lys Pro Pro Asp Cys Asp Pro Asn	1730	1735	1740
Lys Val Asn Pro Gly Ser Ser Val Lys Gly Asp Cys Gly Asn Pro Ser	1745	1750	1755
Val Gly Ile Phe Phe Phe Val Ser Tyr Ile Ile Ile Ser Phe Leu Val	1765	1770	1775
Val Val Asn Met Tyr Ile Ala Val Ile Leu Glu Asn Phe Ser Val Ala	1780	1785	1790
Thr Glu Glu Ser Ala Glu Pro Leu Ser Glu Asp Asp Phe Glu Met Phe	1795	1800	1805
Tyr Glu Val Trp Glu Lys Phe Asp Pro Asp Ala Thr Gln Phe Met Glu	1810	1815	1820
Phe Glu Lys Leu Ser Gln Phe Ala Ala Ala Leu Glu Pro Pro Leu Asn	1825	1830	1835
Leu Pro Gln Pro Asn Lys Leu Gln Leu Ile Ala Met Asp Leu Pro Met	1845	1850	1855
Val Ser Gly Asp Arg Ile His Cys Leu Asp Ile Leu Phe Ala Phe Thr	1860	1865	1870
Lys Arg Val Leu Gly Glu Ser Gly Glu Met Asp Ala Leu Arg Ile Gln	1875	1880	1885
Met Glu Glu Arg Phe Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln			



1890	1895	1900
Pro Ile Thr Thr Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val		
1905	1910	1915 1920
Ile Ile Gln Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys		
	1925	1930 1935
Gln Ala Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn		
	1940	1945 1950
Leu Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser		
	1955	1960 1965
Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro Pro		
	1970	1975 1980
Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu Gln Glu		
1985	1990	1995 2000
Gly Lys Asp Glu Lys Ala Lys Gly Lys		
	2005	

<210> 4  
 <211> 1246  
 <212> DNA  
 <213> Homo sapiens

<400> 4

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ngnsartrvr	aktsvgktvg	asvkkdsvmt	vcsvagmgnr	nkewtnashs	kntvnyngtn	180
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tymvvgssna	vvamaynata	kamkkaaaat	atashrsaa	grsdsssask	ssksakrrnr	300
rkkrrksggk	ddkssdsrrk	grsgnrtykr	ysshssrgss	rrnsrtssrg	rakdvgsnda	360
ddhstdnsrr	dsvrrhgrn	snstsrssrm	avangknhst	vdngvsvsg	gsvtsvgvdk	420
atddngtttt	mrkrrssshv	smddsrrams	astntvsrkc	cwyksnwcds	ywkvkhvvnv	480
vmdvdatcvn	tmamhymtdh	nnvtvgnvtg	tamkamdyyy	gwndgvtsvg	anvgsvrssr	540
vkakswtnmk	gnsvgagntv	avavvgmgks	ykdcvckasd	crwhmndhsv	rvcgwtmwdc	600
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kgmvdvtrvd	smcnmvtmmv	tddsylvttsr	nvvtgcvksr	hytgvwmdvv	vsvgmakyvs	1020
trvrargrrk	gakgrtamms	angvmyagms	nayvkrvgdd	mntgnsmtct	sagwdgansk	1080
dcdnkvnsgs	vkgdcgnsvg	vsysvvvnmy	avnsvatsas	ddmyvwkdda	tmksaaannk	1140
amdmsvgdrh	cdatkrvgsg	mdarmrmasn	skvsytttkr	kvsavrayrr	hkrtvkasty	1200
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<210> 5  
 <211> 850  
 <212> DNA  
 <213> Homo sapiens

<400> 5

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gcaaggagaa gcaatactgg gagattacag agaagaaagg aaaaaaggct gagagaaaag 180
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ttgctgattt gtattaggta ccatagagtg aggcgaggat gaagccgaga agatactgca 360
gaggtctctg gtgcatgtgt gtatgtgtgc gtttgtgtgt gtttgtgtgt ctgtgtgttc 420
tgccccagtg agactgcagc ccttgtaaact actttgacac cttttgcaag aaggaatctg 480
aacaattgca actgaaggca cattgttatt atctcgtctt tgggtgatgc tgttcctcac 540
tgcagatgga taattttcct tttaatcagg taagccatct aattgtttca tcttgatttt 600
aagtttattc attccagtta ttccttttga aaaagagtcc atggaaattc agtttgggca 660
gagcaggaag tccatttttg tatgtgtatt cagaccaact gtccccctcc tccctctcct 720
cctcttcttg tccccctccc cgcgcctccc tctctcaacc ttccatgaac tgaaatcagg 780
tttgttttgc agttcagcat tttgatagaa gatgggatcc tttggcctga aatagcttgg 840
catctggcca                                     850
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<210> 6

<211> 483

<212> DNA

<213> Homo sapiens

<400> 6

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caggacctga cagcttcaac ttcttcacca gagaatctct tgcggctatt gaaagacgca 180
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cccaaagcaa atagtgactt ggaagctgga aagaaccttc catttattta tggagacatt 300
cctccagaga tgggtgtcaga gcccctggag gacctggacc cctactatat caataagaaa 360
gtgagtgttt tttttatcag gcatattttt gctgctaatt gcctactgca ttccttggac 420
tgttgtagca ccaacacatg ccaatagcac aaatctagta tctctgttag aatgaacaca 480
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<210> 7

<211> 497

<212> DNA

<213> Homo sapiens

<400> 7

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tggtttctca tttaacttta caataattta ttatgacaag taacagaaag tagataacag 120
agtttaagtg gtttatactt tcatacttct atgttgtgtt cctgtcttac agacttttat 180
agtattgaat aaagggaagg ccatcttccg gttcagtgcc acctctgccc tgtacatttt 240
aactcccttc aatcctctta ggaaaatagc tattaagatt ttggtacatt catatccttt 300
ttcaagtgat taatatatta tttttgtaca tgatctgtaa gcactttata gctaaatatc 360
aaattaagtt gggaaatgtc catattatat aggtttcatc actctcattt tgcatctttg 420
tcatattagc ctcatcttta aagttcatta atcacataga cattactgaa acatgtactc 480
tttaacattt tatatat                                     497
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<210> 8

<211> 501

<212> DNA

<213> Homo sapiens

<400> 8

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cattttacac atgaagaaat tgaaatgtaa ggagattaga agacttgccc acaatgcatt 120
tatccctgaa ttttggctaa gctgcagttt gggcttttca atgttagctt ttgtaatat 180
aacacttgga ttttgatttt cttttgtgtg ttccttaaca ataacctaca ttattcagca 240
tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg 300
attggacaaa gaatgtagag taagttcaac ttatatTTTT aataacatat atacattygg 360
gattytgaaa ctgtgtctta atgtagtctt aaaataaaac tgaagagcat tttattaaag 420
tcattcctag acaaaattac gcagcaagag gacaatgctc attggccctc aggcctgctg 480
gcgttatact gattatcact c                                     501
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<210> 9

<211> 563

<212> DNA

<213> Homo sapiens

<400> 9

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aactctttgt gttaggaagc tgaatttaaa tttagggtta cgtttcattt gtatgaaatt 120
aaaatccatc tgcttagttt tcttttttag tatttatcta ttccactgat ggagtataa 180
gaaattggta tgctatgaaa aaacactgtt actttatcaa attttttga tgcttgtttt 240
cagatacacc ttcacaggaa tatatacttt tgaatcactt ataaaaatta ttgcaagggg 300
attctgttta gaagatttta ctttccttcg ggatccatgg aactggctcg atttcactgt 360
cattacattt gcgtaagtgc ctttbytgaa actttaagag agaacatagt ttggttttcc 420
atcagtgtct atgcttttaa gaataggttt gctttacctg tagaatattt ttgtgtgatt 480
tatacattca aactctggat ttcaatttag cacaacaaag gtctaagtgg aatttcacta 540
tagcatgaag gctttgcagt agt                                     563
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<210> 10

<211> 253

<212> DNA

<213> Homo sapiens

<400> 10

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ctacagggtt gtaacagaat ttgtaaacct aggcaatttt tcagctcttc gcactttcag 120
agtcttgaga gctttgaaaa ctatttcggt aattccaggt aagaagtgat tagagtaaag 180
gataggctct ttgtacctac agctttttct ttgtgtcctg tttttgtgtt tgtgtgtgaa 240
ctcccgtta cag                                     253
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<210> 11

<211> 340

<212> DNA

<213> Homo sapiens

<400> 11

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ggcaatgtct cggcattgag aacattcaga gttctccgag cattgaagac gatttcagtc 180
attccagggt agagcaaggt tagataatga gacggacca tcatgtgatt cagcctcctt 240
ctctgcttga cattcagttt tacagaaaat caggaatcat aagactaggt gttcaaagaa 300
atgattatta tgttagacat agcttatcag cctggagtta                                     340
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<210> 12  
<211> 409  
<212> DNA  
<213> Homo sapiens

<400> 12  
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gagccctgat ccagtctgtg aagaagctct cagatgtaat gatcctgact gtgttctgtc 120  
tgagcgtatt tgctctaatt gggctgcagc tgttcatggg caacctgagg aataaatgta 180  
tacaatggcc tcccaccaat gcttccttgg aggaacatag tatagaaaag aatataactg 240  
tgaattataa tggtagactt ataaatgaaa ctgtctttga gtttgactgg aagtcatata 300  
ttcaagattc aagtaagaat tattgttatg tacatttcct taaaaagtag aattggattg 360  
tttgaacac aaaggataaa tacttgaggg gctggatatc ccattttac 409

<210> 13  
<211> 266  
<212> DNA  
<213> Homo sapiens

<400> 13  
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agtagaacct gaccttcctg ttctctttga gtgtttttta caatgcaaat gttcagcata 120  
cgactttctt ttttcaaaca ggatatcatt atttcctgga gggtttttta gatgcactac 180  
tatgtggaaa tagctctgat gcagggtaag tcaatattgt gtgcatctgt gtatattgta 240  
tgtacacaat acatatgtgt atcttt 266

<210> 14  
<211> 604  
<212> DNA  
<213> Homo sapiens

<400> 14  
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gcaccatatt ttaatgatga caccaagtag ctaataagac tatatgcagt caaaagttgg 120  
gaaatagatt agttacttat ttgtcaaact tttattttga aataccaaat ctttctgact 180  
aggcaatatc atagcatagt atcagagtaa aaaggcagca gaacgacttg taatactttc 240  
ttttacccca cttgcagcca atgtccagag ggatatatgt gtgtgacagc tggtagaaat 300  
cccaattatg gctacacaag ctttgatacc ttcagttggg cttttttgtc cttgtttcga 360  
ctaagtactc aggacttctg ggaaaaatctt tatcaactgg tgagaactaa agagccacac 420  
tctccattta agtaaaaagta tacaagaaaa ccaattgagt tatgaaatta aaaccggatg 480  
ataatatagt agaaagagca gaacttgaca cgagacttga gttcctctat cctattgatt 540  
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tcaa 604

<210> 15  
<211> 378  
<212> DNA  
<213> Homo sapiens

<400> 15  
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atattgggaa ataattctga tatttttgtt tgcagacatt acgtgctgct gggaaaacgt 120  
acatgatatt ttttgtattg gtcattttct tgggctcatt ctacctaata aatttgatcc 180

tggctgtggt	ggccatggcc	tacgaggaac	agaatcaggc	caccttggaa	gaagcagaac	240
agaaagaggc	cgaatttcag	cagatgattg	aacagcttaa	aaagcaacag	gaggcagctc	300
aggtaagctg	ccctgctcat	ggcactgacc	tttatcgtct	gatgtactat	atgagagaag	360
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<210> 16  
 <211> 845  
 <212> DNA  
 <213> Homo sapiens

<400> 16

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cataata	aa	at	gt	tt	g	ag	caa	ac	ta	aa	at	tt	ct	cc	aa	aa	gc	ct	ta	aa	tt	ag	gt	ag	aa	180			
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cagttca	ata	ta	tt	tt	tt	ta	aa	ag	cc	at	g	ca	aa	ta	ct	ta	ct	ag	cc	tt	ta	aa	ga	aa	ga	ta	ca	300	
gtctct	tt	ca	g	tt	gt	at	gt	tt	aaa	at	ca	tt	tt	ct	ta	ta	ta	ag	gc	ag	ca	ac	gg	ca	ac	360			
tgccct	ca	ga	aa	ca	tt	cc	ag	ag	ag	cc	ca	gt	gc	ag	ca	gg	ca	gg	ct	ct	ca	ga	ca	gt	ct	ct	ga	420	
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aactga	at	ca	ac	ca	tt	gt	tt	ta	at	tt	tt	aa	ac	cc	ca	tt	ct	tt	ca	ca	ta	gt	tt	at	tg	ca	780		
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<210> 17  
 <211> 965  
 <212> DNA  
 <213> Homo sapiens

<400> 17

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taatccc	aa	gg	ct	ag	aa	ac	tt	ct	tt	tt	tt	ca	ag	gt	aa	tt	ta	at	tt	aa	tg	ga	at	gc	ca	180			
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cttctac	ata	at	ct	tg	ca	aa	at	ga	aa	ta	ca	at	ta	aa	gt	cc	at	at	ta	at	at	at	ga	ct	ct	ta	300		
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<210> 18  
 <211> 641  
 <212> DNA

<213> Homo sapiens

<400> 18

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atgatacaat aagtcagaaa tatctgccat caccaattga atatgaaagt gcatgatgca 180
tgtgtttcat gaaattcact gtgtcaccat ttggttgttt gcttgtcata ttgctcaaat 240
taattgttta atgcattagc attttttttt acagggaaca accactgaaa ctgaaatgag 300
aaagagaagg tcaagttctt tccacgtttc catggacttt ctagaagatc cttcccaaag 360
gcaacgagca atgagtatag ccagcattct aacaaataca gtagaagggt ggtaacaaat 420
tctattttcg tttcaattat tttcaccaaa cttatatgtt ctcatttcaa acaaatatat 480
ttgtgagttg ggaatagtgc attctaataa aaagacagtc taattcaaga gctgttattt 540
cttataatcta ctcatatatt ctagaagcct taacaattta ttttaaaatg agtgatattg 600
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<210> 19

<211> 818

<212> DNA

<213> Homo sapiens

<400> 19

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ataaccttgg gaggtttaga gtaaactgta atttttttta caagtacaaa aaaggggtgc 180
tctgtaacaa aaatgtgttg attactgaaa ataagtttag tggatatgaa ataaatgtgt 240
gtgtataaag tawacctttt ggtgggtctt tttttttttt ttcttaatct agaacttgaa 300
gaatccaggc agaaatgccc accctgttgg tataaatttt ccaacatatt cttaatctgg 360
gactgttctc catattgggt aaaagtgaac catgttgtca acctggttgt gatggacca 420
tttgttgacc tggccatcac catctgtatt gtcttaataa ctcttttcat ggccatggag 480
cactatccaa tgacggacca tttcaataat gtgcttacag taggaaactt ggtaagcata 540
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tgtgtatagc agtctttcaa ccattccttca tgcttctctg cccttgcaaa atcgcaatta 660
tatttagctg gctatactct acttttttgc caaaaataat cacccttaat gtgtcacaaa 720
aaactgagaa aggcataggc ctacagcact acttgaaaag tcaacagcaa tatttataat 780
ttttcaggat ccagaagtag ctcatagatt aagaacat 818
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<210> 20

<211> 645

<212> DNA

<213> Homo sapiens

<400> 20

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aactacaaat tgccatacaa atttaagtta gtaatagaat cattgtggga aaatagcata 180
agcattatgt tctaagagca aatcttatgt catgtatgtt attatctggg ggaattagat 240
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<210> 21  
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<212> DNA  
<213> Homo sapiens

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caccagcatg gcacatgtat acatatgtaa ctaacctgca cattgtgcac atgtacccta 540  
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caacacagca atatabcagt gcccctgcat tttttatacc aaattctatt ttgtcagtca 720  
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<213> Homo sapiens

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<211> 516  
<212> DNA  
<213> Homo sapiens

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<210> 24
<211> 640
<212> DNA
<213> Homo sapiens

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<210> 25
<211> 607
<212> DNA
<213> Homo sapiens

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<400> 25
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aatgtcatat gcatatgatt aattttttta atagcttatg gagtataatt atttttgaaa 240
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gggctaa 607

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<210> 26
<211> 336
<212> DNA
<213> Homo sapiens

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<400> 26
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<210> 27  
<211> 677  
<212> DNA  
<213> Homo sapiens

<400> 27  
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<212> DNA  
<213> Homo sapiens

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<210> 29  
<211> 379  
<212> DNA  
<213> Homo sapiens

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<210> 30  
<211> 393  
<212> DNA  
<213> Homo sapiens

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<210> 31
<211> 539
<212> DNA
<213> Homo sapiens

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<400> 31
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aactcctttg ttgttaaaag catttctatt tctctacaga acaaatttca aggaatgggtc 180
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<210> 32
<211> 3403
<212> DNA
<213> Homo sapiens

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<213> Homo sapiens

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Gly	Pro	Lys	Pro	Asn	Ser	Asp	Leu	Glu	Ala	Gly	Lys	Ser	Leu	Pro	Phe
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Ile	Tyr	Gly	Asp	Ile	Pro	Pro	Glu	Met	Val	Ser	Val	Pro	Leu	Glu	Asp
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Leu	Asp	Pro	Tyr	Tyr	Ile	Asn	Lys	Lys	Thr	Phe	Ile	Val	Leu	Asn	Lys
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Arg	Gly	Phe	Cys	Leu	Glu	Asp	Phe	Thr	Phe	Leu	Arg	Asp	Pro	Trp	Asn
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Glu	Ile	Asn	Ile	Thr	Ser	Phe	Phe	Asn	Asn	Ser	Leu	Asp	Gly	Asn	Gly
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Leu Cys Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Ile  
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Cys Val Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp  
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Thr Phe Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp  
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Phe Trp Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr  
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Tyr Met Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu  
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Gln Ala Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln  
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Met Leu Glu Gln Leu Lys Lys Gln Gln Glu Glu Ala Gln Ala Ala Ala  
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Gln Ser Gly Glu Glu Glu Lys Asn Asp Arg Val Leu Lys Ser Glu Ser  
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Glu Asp Ser Ile Arg Arg Lys Gly Phe Arg Phe Ser Leu Glu Gly Ser  
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Leu Phe Ser Phe Arg Gly Arg Ala Lys Asp Ile Gly Ser Glu Asn Asp  
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Phe Ala Asp Asp Glu His Ser Thr Phe Glu Asp Asn Asp Ser Arg Arg  
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Asp Ser Leu Phe Val Pro His Arg His Gly Glu Arg Arg His Ser Asn  
 610 615 620

Val Ser Gln Ala Ser Arg Ala Ser Arg Val Leu Pro Ile Leu Pro Met  
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Asn	Gly	Lys	Met	His	Ser	Ala	Val	Asp	Cys	Asn	Gly	Val	Val	Ser	Leu	645	650	655
Val	Gly	Gly	Pro	Ser	Thr	Leu	Thr	Ser	Ala	Gly	Gln	Leu	Leu	Pro	Glu	660	665	670
Gly	Thr	Thr	Thr	Glu	Thr	Glu	Ile	Arg	Lys	Arg	Arg	Ser	Ser	Ser	Tyr	675	680	685
His	Val	Ser	Met	Asp	Leu	Leu	Glu	Asp	Pro	Thr	Ser	Arg	Gln	Arg	Ala	690	695	700
Met	Ser	Ile	Ala	Ser	Ile	Leu	Thr	Asn	Thr	Met	Glu	Glu	Leu	Glu	Glu	705	710	715
Ser	Arg	Gln	Lys	Cys	Pro	Pro	Cys	Trp	Tyr	Lys	Phe	Ala	Asn	Met	Cys	725	730	735
Leu	Ile	Trp	Asp	Cys	Cys	Lys	Pro	Trp	Leu	Lys	Val	Lys	His	Leu	Val	740	745	750
Asn	Leu	Val	Val	Met	Asp	Pro	Phe	Val	Asp	Leu	Ala	Ile	Thr	Ile	Cys	755	760	765
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Glu	Gln	Phe	Ser	Ser	Val	Leu	Ser	Val	Gly	Asn	Leu	Val	Phe	Thr	Gly	785	790	795
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Tyr	Tyr	Phe	Gln	Glu	Gly	Trp	Asn	Ile	Phe	Asp	Gly	Phe	Ile	Val	Ser	820	825	830
Leu	Ser	Leu	Met	Glu	Leu	Gly	Leu	Ala	Asn	Val	Glu	Gly	Leu	Ser	Val	835	840	845
Leu	Arg	Ser	Phe	Arg	Leu	Leu	Arg	Val	Phe	Lys	Leu	Ala	Lys	Ser	Trp	850	855	860
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Lys	Ile	Ser	Asn	Asp	Cys	Glu	Leu	Pro	Arg	Trp	His	Met	His	Asp	Phe	915	920	925
Phe	His	Ser	Phe	Leu	Ile	Val	Phe	Arg	Val	Leu	Cys	Gly	Glu	Trp	Ile	930	935	940

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Lys Tyr Phe Val Ser Pro Thr Leu Phe Arg Val Ile Arg Leu Ala Arg  
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Leu Leu Leu Phe Leu Val Met Phe Ile Tyr Ala Ile Phe Gly Met Ser  
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Asn Phe Ala Tyr Val Lys Arg Glu Val Gly Ile Asp Asp Met Phe Asn  
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Phe Glu Thr Phe Gly Asn Ser Met Ile Cys Leu Phe Gln Ile Thr Thr  
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Pro Asp Cys Asp Pro Asp Lys Asp His Pro Gly Ser Ser Val Lys Gly  
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Asp Asp Phe Glu Met Phe Tyr Glu Val Trp Glu Lys Phe Asp Pro Asp  
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Leu Asp Pro Pro Leu Leu Ile Ala Lys Pro Asn Lys Val Gln Leu Ile  
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 Gly Lys Ala Ile Ser Arg Phe Ser Ala Thr Pro Ala Leu Tyr Ile Leu

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Phe	Cys	Leu	Ser	Val	Phe	Ala	Leu	Ile	Gly	Leu	Gln	Leu	Phe	Met	Gly	
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Thr	Thr	Phe	Asn	Arg	Thr	Val	Ser	Ile	Phe	Asn	Trp	Asp	Glu	Tyr	Ile	
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Thr	Phe	Ser	Trp	Ala	Phe	Leu	Ser	Leu	Phe	Arg	Leu	Met	Thr	Gln	Asp	
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Phe	Trp	Glu	Asn	Leu	Tyr	Gln	Leu	Thr	Leu	Arg	Ala	Ala	Gly	Lys	Thr	
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Tyr	Met	Ile	Phe	Phe	Val	Leu	Val	Ile	Phe	Leu	Gly	Ser	Phe	Tyr	Leu	



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Ile	Asn	Leu	Ile	Leu	Ala	Val	Val	Ala	Met	Ala	Tyr	Glu	Glu	Gln	Asn
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Gln	Ala	Thr	Leu	Glu	Glu	Ala	Glu	Gln	Lys	Glu	Ala	Glu	Phe	Gln	Gln
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Met	Leu	Glu	Gln	Leu	Lys	Lys	Gln	Gln	Glu	Glu	Ala	Gln	Ala	Ala	Ala
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Ser	Glu	Lys	Glu	Leu	Lys	Asn	Arg	Arg	Lys	Lys	Lys	Lys	Lys	Gln	Lys
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Gln	Ser	Gly	Glu	Glu	Glu	Lys	Asn	Asp	Arg	Val	Leu	Lys	Ser	Glu	Ser
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Glu	Asp	Ser	Ile	Arg	Arg	Lys	Gly	Phe	Arg	Phe	Ser	Leu	Glu	Gly	Ser
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Arg	Leu	Thr	Tyr	Glu	Lys	Arg	Phe	Ser	Ser	Pro	His	Gln	Ser	Leu	Leu
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Leu	Phe	Ser	Phe	Arg	Gly	Arg	Ala	Lys	Asp	Ile	Gly	Ser	Glu	Asn	Asp
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Phe	Ala	Asp	Asp	Glu	His	Ser	Thr	Phe	Glu	Asp	Asn	Asp	Ser	Arg	Arg
		595					600					605			
Asp	Ser	Leu	Phe	Val	Pro	His	Arg	His	Gly	Glu	Arg	Arg	His	Ser	Asn
	610					615					620				
Val	Ser	Gln	Ala	Ser	Arg	Ala	Ser	Arg	Val	Leu	Pro	Ile	Leu	Pro	Met
625						630					635				640
Asn	Gly	Lys	Met	His	Ser	Ala	Val	Asp	Cys	Asn	Gly	Val	Val	Ser	Leu
				645					650					655	
Val	Gly	Gly	Pro	Ser	Thr	Leu	Thr	Ser	Ala	Gly	Gln	Leu	Leu	Pro	Glu
			660					665					670		
Gly	Thr	Thr	Thr	Glu	Thr	Glu	Ile	Arg	Lys	Arg	Arg	Ser	Ser	Ser	Tyr
			675				680					685			
His	Val	Ser	Met	Asp	Leu	Leu	Glu	Asp	Pro	Thr	Ser	Arg	Gln	Arg	Ala
	690					695					700				
Met	Ser	Ile	Ala	Ser	Ile	Leu	Thr	Asn	Thr	Met	Glu	Glu	Leu	Glu	Glu

705		710		715		720
Ser Arg Gln Lys Cys Pro Pro Cys Trp Tyr Lys Phe Ala Asn Met Cys						
		725		730		735
Leu Ile Trp Asp Cys Cys Lys Pro Trp Leu Lys Val Lys His Leu Val						
		740		745		750
Asn Leu Val Val Met Asp Pro Phe Val Asp Leu Ala Ile Thr Ile Cys						
		755		760		765
Ile Val Leu Asn Thr Leu Phe Met Ala Met Glu His Tyr Pro Met Thr						
		770		775		780
Glu Gln Phe Ser Ser Val Leu Ser Val Gly Asn Leu Val Phe Thr Gly						
		785		790		800
Ile Phe Thr Ala Glu Met Phe Leu Lys Ile Ile Ala Met Asp Pro Tyr						
		805		810		815
Tyr Tyr Phe Gln Glu Gly Trp Asn Ile Phe Asp Gly Phe Ile Val Ser						
		820		825		830
Leu Ser Leu Met Glu Leu Gly Leu Ala Asn Val Glu Gly Leu Ser Val						
		835		840		845
Leu Arg Ser Phe Arg Leu Leu Arg Val Phe Lys Leu Ala Lys Ser Trp						
		850		855		860
Pro Thr Leu Asn Met Leu Ile Lys Ile Ile Gly Asn Ser Val Gly Ala						
		865		870		875
Leu Gly Asn Leu Thr Leu Val Leu Ala Ile Ile Val Phe Ile Phe Ala						
		885		890		895
Val Val Gly Met Gln Leu Phe Gly Lys Ser Tyr Lys Glu Cys Val Cys						
		900		905		910
Lys Ile Ser Asn Asp Cys Glu Leu Pro Arg Trp His Met His Asp Phe						
		915		920		925
Phe His Ser Phe Leu Ile Val Phe Arg Val Leu Cys Gly Glu Trp Ile						
		930		935		940
Glu Thr Met Trp Asp Cys Met Glu Val Ala Gly Gln Thr Met Cys Leu						
		945		950		955
Thr Val Phe Met Met Val Met Val Ile Gly Asn Leu Val Val Leu Asn						
		965		970		975
Leu Phe Leu Ala Leu Leu Leu Ser Ser Phe Ser Ser Asp Asn Leu Ala						
		980		985		990
Ala Thr Asp Asp Asp Asn Glu Met Asn Asn Leu Gln Ile Ala Val Gly						
		995		1000		1005
Arg Met Gln Lys Gly Ile Asp Phe Val Lys Arg Lys Ile Arg Glu Phe						

1010	1015	1020
Ile Gln Lys Ala Phe Val Arg Lys Gln Lys Ala Leu Asp Glu Ile Lys		
1025	1030	1035 1040
Pro Leu Glu Asp Leu Asn Asn Lys Lys Asp Ser Cys Ile Ser Asn His		
	1045	1050 1055
Thr Thr Ile Glu Ile Gly Lys Asp Leu Asn Tyr Leu Lys Asp Gly Asn		
	1060	1065 1070
Gly Thr Thr Ser Gly Ile Gly Ser Ser Val Glu Lys Tyr Val Val Asp		
	1075	1080 1085
Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val Thr		
	1090	1095 1100
Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn Thr Glu		
	1105	1110 1115 1120
Glu Phe Ser Ser Glu Ser Asp Met Glu Glu Ser Lys Glu Lys Leu Asn		
	1125	1130 1135
Ala Thr Ser Ser Ser Glu Gly Ser Thr Val Asp Ile Gly Ala Pro Ala		
	1140	1145 1150
Glu Gly Glu Gln Pro Glu Val Glu Pro Glu Glu Ser Leu Glu Pro Glu		
	1155	1160 1165
Ala Cys Phe Thr Glu Asp Cys Val Arg Lys Phe Lys Cys Cys Gln Ile		
	1170	1175 1180
Ser Ile Glu Glu Gly Lys Gly Lys Leu Trp Trp Asn Leu Arg Lys Thr		
	1185	1190 1195 1200
Cys Tyr Lys Ile Val Glu His Asn Trp Phe Glu Thr Phe Ile Val Phe		
	1205	1210 1215
Met Ile Leu Leu Ser Ser Gly Ala Leu Ala Phe Glu Asp Ile Tyr Ile		
	1220	1225 1230
Glu Gln Arg Lys Thr Ile Lys Thr Met Leu Glu Tyr Ala Asp Lys Val		
	1235	1240 1245
Phe Thr Tyr Ile Phe Ile Leu Glu Met Leu Leu Lys Trp Val Ala Tyr		
	1250	1255 1260
Gly Phe Gln Val Tyr Phe Thr Asn Ala Trp Cys Trp Leu Asp Phe Leu		
	1265	1270 1275 1280
Ile Val Asp Val Ser Leu Val Ser Leu Thr Ala Asn Ala Leu Gly Tyr		
	1285	1290 1295
Ser Glu Leu Gly Ala Ile Lys Ser Leu Arg Thr Leu Arg Ala Leu Arg		
	1300	1305 1310
Pro Leu Arg Ala Leu Ser Arg Phe Glu Gly Met Arg Ala Val Val Asn		

1315	1320	1325
Ala Leu Leu Gly Ala Ile Pro Ser Ile Met Asn Val Leu Leu Val Cys		
1330	1335	1340
Leu Ile Phe Trp Leu Ile Phe Ser Ile Met Gly Val Asn Leu Phe Ala		
1345	1350	1355 1360
Gly Lys Phe Tyr His Cys Ile Asn Tyr Thr Thr Gly Glu Met Phe Asp		
	1365	1370 1375
Val Ser Val Val Asn Asn Tyr Ser Glu Cys Lys Ala Leu Ile Glu Ser		
	1380	1385 1390
Asn Gln Thr Ala Arg Trp Lys Asn Val Lys Val Asn Phe Asp Asn Val		
	1395	1400 1405
Gly Leu Gly Tyr Leu Ser Leu Leu Gln Val Ala Thr Phe Lys Gly Trp		
	1410	1415 1420
Met Asp Ile Met Tyr Ala Ala Val Asp Ser Arg Asn Val Glu Leu Gln		
	1425	1430 1435 1440
Pro Lys Tyr Glu Asp Asn Leu Tyr Met Tyr Leu Tyr Phe Val Ile Phe		
	1445	1450 1455
Ile Ile Phe Gly Ser Phe Phe Thr Leu Asn Leu Phe Ile Gly Val Ile		
	1460	1465 1470
Ile Asp Asn Phe Asn Gln Gln Lys Lys Lys Phe Gly Gly Gln Asp Ile		
	1475	1480 1485
Phe Met Thr Glu Glu Gln Lys Lys Tyr Tyr Asn Ala Met Lys Lys Leu		
	1490	1495 1500
Gly Ser Lys Lys Pro Gln Lys Pro Ile Pro Arg Pro Ala Asn Lys Phe		
	1505	1510 1515 1520
Gln Gly Met Val Phe Asp Phe Val Thr Lys Gln Val Phe Asp Ile Ser		
	1525	1530 1535
Ile Met Ile Leu Ile Cys Leu Asn Met Val Thr Met Met Val Glu Thr		
	1540	1545 1550
Asp Asp Gln Ser Gln Glu Met Thr Asn Ile Leu Tyr Trp Ile Asn Leu		
	1555	1560 1565
Val Phe Ile Val Leu Phe Thr Gly Glu Cys Val Leu Lys Leu Ile Ser		
	1570	1575 1580
Leu Arg Tyr Tyr Tyr Phe Thr Ile Gly Trp Asn Ile Phe Asp Phe Val		
	1585	1590 1595 1600
Val Val Ile Leu Ser Ile Val Gly Met Phe Leu Ala Glu Leu Ile Glu		
	1605	1610 1615
Lys Tyr Phe Val Ser Pro Thr Leu Phe Arg Val Ile Arg Leu Ala Arg		

1620	1625	1630
Ile Gly Arg Ile Leu Arg Leu Ile Lys Gly Ala Lys Gly Ile Arg Thr 1635	1640	1645
Leu Leu Phe Ala Leu Met Met Ser Leu Pro Ala Leu Phe Asn Ile Gly 1650	1655	1660
Leu Leu Leu Phe Leu Val Met Phe Ile Tyr Ala Ile Phe Gly Met Ser 1665	1670	1675 1680
Asn Phe Ala Tyr Val Lys Arg Glu Val Gly Ile Asp Asp Met Phe Asn 1685	1690	1695
Phe Glu Thr Phe Gly Asn Ser Met Ile Cys Leu Phe Gln Ile Thr Thr 1700	1705	1710
Ser Ala Gly Trp Asp Gly Leu Leu Ala Pro Ile Leu Asn Ser Gly Pro 1715	1720	1725
Pro Asp Cys Asp Pro Asp Lys Asp His Pro Gly Ser Ser Val Lys Gly 1730	1735	1740
Asp Cys Gly Asn Pro Ser Val Gly Ile Phe Phe Phe Val Ser Tyr Ile 1745	1750	1755 1760
Ile Ile Ser Phe Leu Val Val Val Asn Met Tyr Ile Ala Val Ile Leu 1765	1770	1775
Glu Asn Phe Ser Val Ala Thr Glu Glu Ser Ala Glu Pro Leu Ser Glu 1780	1785	1790
Asp Asp Phe Glu Met Phe Tyr Glu Val Trp Glu Lys Phe Asp Pro Asp 1795	1800	1805
Ala Thr Gln Phe Ile Glu Phe Ala Lys Leu Ser Asp Phe Ala Asp Ala 1810	1815	1820
Leu Asp Pro Pro Leu Leu Ile Ala Lys Pro Asn Lys Val Gln Leu Ile 1825	1830	1835 1840
Ala Met Asp Leu Pro Met Val Ser Gly Asp Arg Ile His Cys Leu Asp 1845	1850	1855
Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu Ser Gly Glu Met 1860	1865	1870
Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe Met Ala Ser Asn Pro 1875	1880	1885
Ser Lys Val Ser Tyr Glu Pro Ile Thr Thr Thr Leu Lys Arg Lys Gln 1890	1895	1900
Glu Glu Val Ser Ala Ile Ile Ile Gln Arg Ala Tyr Arg Arg Tyr Leu 1905	1910	1915 1920
Leu Lys Gln Lys Val Lys Lys Val Ser Ser Ile Tyr Lys Lys Asp Lys		

	1925		1930		1935
Gly Lys Glu Cys Asp Gly Thr Pro Ile Lys Glu Asp Thr Leu Ile Asp					
1940		1945		1950	
Lys Leu Asn Glu Asn Ser Thr Pro Glu Lys Thr Asp Met Thr Pro Ser					
1955		1960		1965	
Thr Thr Ser Pro Pro Ser Tyr Asp Ser Val Thr Lys Pro Glu Lys Glu					
1970		1975		1980	
Lys Phe Glu Lys Asp Lys Ser Glu Lys Glu Asp Lys Gly Lys Asp Ile					
1985		1990		1995	2000
Arg Glu Ser Lys Lys					
2005					

<210> 37  
 <211> 912  
 <212> DNA  
 <213> Homo sapiens

<400> 37

gaattcttta	tatgggttga	atgactttct	gacatagcaa	ataaaaagca	tgaggagaag	60
cattatctgt	taacaaaatt	aacacttaaa	atcaacaaag	ttttaatgtt	tcgttccaag	120
aaaagcctgt	ggaagatcag	ttccacaact	gagagctttg	ggctgcttca	gacatatgtc	180
tgtgtgtacg	ctgtgaaggt	gtttctcttc	acagttcccc	gccctctagt	ggtagttaca	240
ataatgccat	ttttagtcc	ctgtacagga	aatgcctctt	cttacttcag	ttaccagaat	300
ccttttacag	gaagttagg	gtggtctttg	aaggagaatt	aaaaaaaaaa	aaaaaaaaaa	360
aaaaaagatt	tttttttttt	taaagcatga	tggaatttta	gctgcagtct	tcttggggcc	420
agcttatcaa	tcccaaaact	tgggggtaaa	agattctaca	ggggtaatgt	tttattattc	480
ttattatgct	tattctctgt	gatgcttctc	tacctttaca	gtagtagaat	ccttggggaa	540
atctgcagag	ggaccacttt	cattttgaag	ctgctggctg	catgttttag	catgtctctt	600
ctattagaga	atccaggcat	ggcagtttcc	tccccagtg	tgcaaggacc	atcttcatgc	660
ctatgtctgt	cgctaggcat	gagggctctc	aggaatgggt	gaaaaaaatg	agggatgttt	720
tggaggcact	ataatactgg	ggagggcagt	ctgctagctg	gtagctgaaa	ggtcctgggt	780
tacttcaaca	ttttttttta	ataaaactgt	gcagtagttt	ttgttatttt	agggttccct	840
ctgttttatc	tggtgtatgc	tgcagaagtg	aactgcataa	cacatttcac	tcttagaaat	900
gcattccata	ta					912

<210> 38  
 <211> 722  
 <212> DNA  
 <213> Homo sapiens

<400> 38

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tctgtagcac	tttcttatgc	aaggagctaa	acagtgatta	aaggagcagg	atgaaaagat	120
ggcacagtca	gtgctggtac	cgccaggacc	tgacagcttc	cgcttcttta	ccagggaatc	180
ccttgctgct	attgaacaac	gcattgcaga	agagaaagct	aagagaccca	aacagggaacg	240
caaggatgag	gatgatgaaa	atggcccaaa	gccaaacagt	gacttgggaag	cagsaaaatc	300
tcttccattt	atztatggag	acattcctcc	agagatgggt	tcagtgcctc	tggaggatct	360
ggacccctac	tatatcaata	agaaagtgag	ttcttagtca	agttgccttc	actgcctatt	420
tactaattgg	ttctgggcta	gtcccaggga	tgatggtgaa	gaaggctggc	ctccttccct	480
ctgtctaaag	tatcactaag	atgctggatg	ggcctgaccg	tgtaatggac	caatgatcct	540

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agaagtcttt tggaagcact catttgaacc tgcatttgtg agacaggcag agaactgggtg 600
aggcatcctc cagcgcggga attaaaggaag gacaaaagcc tattcacctt cttgaataca 660
aattatatgc ttaaaccagt gtaaatgtac cctgattccc taataatgtt gagaagcaaa 720
aa 722

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<210> 39
<211> 561
<212> DNA
<213> Homo sapiens

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<400> 39
cctatggcat tgatcacaaa ttttcttaat aatcctcatg tcatttatca aatttaggaa 60
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tggtatacac tattttacag ggcaatattt ataaataatg gttttacttt tctcttaaaa 180
tattcttaat atatattcta agttttgttt tatgtgttgt gttttctttt tcagacgttt 240
atagtattga ataaagggaag agcaatctct cgattcagtg ccaccctgc cctttacatt 300
ttaactccct tcaaccctat tagaaaatta gctattaaga ttttgggtaca ttcataatcct 360
ttttcaaata gtcacttaat atgattttct tctttgacca agttattgag ctacacattt 420
tccaaaatat ctgtggttgg caatgttatg tgttctttct ttttctttcc ttttactcaa 480
tcgttagcat gttgcaaaat gagatcacag gtaagtgaat tactttcccc cgtcttctaa 540
gtgtttcttc tctacccaac t 561

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<210> 40
<211> 510
<212> DNA
<213> Homo sapiens

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<400> 40
acctaaatag cctcaaaaata gttgatggct tggcctgaag acaagatcta aatatgaggt 60
tgctgagtta tagaaatggc aaaaaaaagg gtcaataata gaataataag caacaaaaata 120
atagtaagca ctaaagtttt aaacttcatg gtgggtgaagg catggtagtg cataaaagta 180
agatttttcc attgaacttt gtcttccttg acgatattct actttattca atatgctcat 240
tatgtgcacg attgttacca actgtgtatt tatgaccatg agtaaccctc cagactggac 300
aaagaatgtg gagtaagtat aaatatTTTT caatatgtac ctccctttat gtttcatatt 360
gtgcttttaa caccttgaga cctcctcaat ttctttaaca aatcatgcta gctactgtta 420
accagaccct gattcaaatt catttctgtc actaaatgtc ttctaggaca aagcttgtag 480
tgggctcact tagttgtgta aattactgca 510

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<210> 41
<211> 370
<212> DNA
<213> Homo sapiens

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<400> 41
taagatatgt acttgtaaata taaccactag atttttaatg tgagcttggc tattgtctct 60
caggtatacc ttacaggaa tttatacttt tgaatcactt attaaaatac ttgcaagggg 120
cttttgttta gaagatttca catttttacg ggatccatgg aattgggttg atttcacagt 180
cattactttt gcgtaagtat cttaatacat tttctatcct ggaagagtaa atcactgggtg 240
ggagcctata ctatatTTTt cttggtggct tgccctgaca gaccaagcat ttntcttagt 300
aatcatagtt ttcttccaat caaattatcc agtttggtgaga aattaggaac tatcatagta 360
aattacatgg 370

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<210> 42

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<211> 370  
<212> DNA  
<213> Homo sapiens

<400> 42  
caatttagcac tgtaaagtaa taaagtttcc caaataacag agattatgat tgatgacaat 60  
gccattttcc tcttaattgg gaaagctgat ggcgacactc atgaaattaa aaaggtcttg 120  
atgaaagacc aangaagacg tagattttccc taaattctga ataactctga ttttaattcta 180  
caggtagtga acagaatttg taaacctagg caatgtttca gctcttcgaa ctttcagagt 240  
cttgagagct ttgaaaacta tttctgtaat tccaggtaag aagaaaatgg tataaggtgg 300  
taggccccctt atatctccaa ctgtttcttg tgttctgtca ttgtgtttgt gtgtgaaccc 360  
cctattacag 370

<210> 43  
<211> 410  
<212> DNA  
<213> Homo sapiens

<400> 43  
gtaagaagaa aatgggtataa ggtggtaggc cccttatatc tccaactggt tcttgtgttc 60  
tgtcattgtg tttgtgtgtg aacccccctat tacagatatg tgacagagtt tgtggacctg 120  
ggcaatgtct cagcgttgag aacattcaga gttctccgag cattgaaaac aatttcagtc 180  
attccaggty agagctagggt taaacaccga ggctgacttt agctacagtg gtgctacaat 240  
cacagctttt gtgcagaagc cttgttgcta gttgcatatt gcaaataaat atgtaaaaaa 300  
gcaagaattg gtacatcatt ttttggtatg atttgattct ttgcttttta cccgttgctt 360  
tctttaaaac tattctaaat cagcctttga gtttaacaag tgttgcatga 410

<210> 44  
<211> 1066  
<212> DNA  
<213> Homo sapiens

<400> 44  
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caagttctgc tttcattcat tttcaccagc tagtaggctt ttcattgaaa tgttattcaa 120  
tcacaaacat taaactaata ttgttggcat tctgcatgac atttttatct tccaggccaa 180  
gctcatgata tttttgccgg taaaatagct gttgagtagt atatttaant tcccccttct 240  
gattttgttt gtaggcctga agaccattgt gggggccctg atccagtcag tgaagaagct 300  
ttctgatgtc atgatcttga ctgtgttctg tctaagcgtg tttgcgctaa taggattgca 360  
gttggttcatt ggcaacctac gaaataaatg tttgcaatgg cctccagata attcttcctt 420  
tgaaataaat atcacttcc tctttaacaa ttcattggat ggggaatggt ctactttcaa 480  
taggacagtg agcatattta actgggatga atatattgag gataaaagta agatatactc 540  
tataaaccat taagttgttt agttctctaa atattaaata ttatatataa tggaaattat 600  
ctcaatttag atgtgaatca agtgacttag actaatttaa gatgatttaa tacatataaa 660  
agagatatca aaggatacct tattctatct tttttatctg tccattgata tagtaaaagt 720  
tctcatttga aaatgtgttg tcttatactc atgttgaaag taatttcata ttatgccata 780  
ttaaaaaagg tttatttggg agacattaat caggtttttc agtcatttta ataaataagt 840  
cagtagtttg aactattcmg cgtattccac tgaaatgtcg ttaagaagac tgaggggaaa 900  
taatttggcc ctatttgggt gatgcaacat atgtattgag tacatatgct atatctgaaa 960  
ctagagaaac catttatcaa gatgaaataa gaatttgtgt gctcctcaga aggttaagta 1020  
accctgattt agccattcac ttcattccata ttctaattag tccctt 1066

<210> 45  
<211> 385



<212> DNA  
<213> Homo sapiens

<400> 45  
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tatgattgaa aacattttgtg agcttttgcca cctaaacagg gtggctgaag tgttttacag 120  
gatttttaatg attcttttcta ttccttttctc tttaaatagg tcactttttat tttttacagg 180  
ggcaaaatga tgctctgctt tgtggcaaca gctcagatgc agggtaagtg tatgcttcct 240  
actgagtttc agtccacact gctccatcag tgtcaataac ctgccacctc ccaactcatcc 300  
agtcccacca ctctcactc aaaaccctcc ataaattcta cttcacggtg actctcagaa 360  
tgaccaggat aagtgtagat tctca 385

<210> 46  
<211> 430  
<212> DNA  
<213> Homo sapiens

<400> 46  
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cattatataa atcagtcacac ttagtgctga gttaagtact gggtaagggtg agagaaatcg 120  
gcttttttct agtgccctgta taaaacagac attggcatat attaaaacag gaaaaccaat 180  
tagcagactt gccgttattg actycctctc tttcctctaa cctaattaca gccagtgtcc 240  
tgaaggatac atctgtgtga aggctggtag aaaccccaac tatggctaca cgagctttga 300  
cacctttagt tgggcctttt tgtccttatt tctgtctcatg actcaagact tctgggaaaa 360  
cctttatcaa ctgggtgagaa cagataaaat catttttctg agaatcataa aacaccgaac 420  
tcaagagaat 430

<210> 47  
<211> 646  
<212> DNA  
<213> Homo sapiens

<400> 47  
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aaaatctctc ttccattttg cagacactac gtgctgctgg gaaaacgtac atgatatttt 120  
ttgtgctggt catttttcttg ggctcattct atctaataaa tttgatcttg gctgtgggtg 180  
ccatggccta tgaggaacag aatcaggcca cattggaaga ggctgaacag aaggaagctg 240  
aatttcagca gatgctcgaa cagttgaaaa agcaacaaga agaagctcag gtatagtga 300  
caagcatacg gtcctttgtt tttctgtatc taaattcttt aacctaaatg ttgaggctcag 360  
tggcaaggta gttgacatta gaaataggtc atatgtgttt ggtaagtgtc aggagcctgt 420  
ttggttatta agaagttatt actttattgc aatgatctct gtcaatagtg tcaatagtaa 480  
tggcatcaaa aaatggataa ttataattgc tttactgaca tttttttctc cttgtgact 540  
ccttgaggaa attaatgatt aacaaaggcc tcatgtactc aaacttgca agtagataaa 600  
cctacatgtc ctcagttgaa gtatttttctt aggggaagag gaattc 646

<210> 48  
<211> 711  
<212> DNA  
<213> Homo sapiens

<400> 48  
tatgtatcat cttccatatg aatgcgcatt ttactctttg attgggtctaa taacagtgta 60  
ctgtgttcta aaacacagaa taaaatggag aattgttttt caagattatc ttcatgatat 120  
tgaagctcaa ttaagcagta acatgataat tatttttttaa gatnatatgc aacttcccac 180

atacttttgcg	cccttctag	cggcagctgc	agccgcattct	gctgaatcaa	gagacttcag	240
tggtgctgg	gggataggag	ttttttcaga	gagttcttca	gtagcatcta	agttgagctc	300
caaaagtga	aaagagctga	aaaacagaag	aaagaaaaag	aaacagaaag	aacagtctgg	360
agaagaagag	aaaaatgaca	gagtcctaaa	atcggaatct	gaagacagca	taagaagaaa	420
aggtttccgt	ttttccttgg	aaggaagtag	gctgacatat	gaaaagagat	tttcttctcc	480
acaccaggta	aaaatattaa	attacatgaa	ttgtgttctc	ataaattttt	taaaagaata	540
tgccagaatt	taatggagag	aaaaccgcct	tccacctgga	tggcacaatg	ctttcagagt	600
agtgatgatt	atcaagtgtt	ttggctatca	cttcagagaa	tttgtgagtt	ttgcaacttt	660
ttggaatccc	aggaaggaaa	ttttagatcc	ctctgggttt	ggaaaaattt	g	711

<210> 49  
 <211> 1026  
 <212> DNA  
 <213> Homo sapiens

<400> 49	
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gatggaaaat	ggaggaagga gaaaaagcga gaggtaaata gaaaagggtga accttgtaga 120
aagtgccaaa	atgccaccag cagtcattcag aggggtgctt tcttccacat gtccaatgac 180
ttatccttga	gtaagtcaat gactatgaca caatgaatca aattctgttt ttcagaatgc 240
cagctcttaa	ctctcttcat ctcatTTTTTg tttcttttct tgttattcat agtccttact 300
gagcatccgt	ggctcccttt tctctccaag acgcaacagt agggcgagcc ttttcagctt 360
cagagggtcg	gcaaaggaca ttggctctga gaatgacttt gctgatgatg agcacagcac 420
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gaatttkttg	agtttsttgc ccaaaggctg ggagtttgtt caatcaagct gttactgtgc 780
ttgtgaaact	sttctattca gacttttcta caaagtaatt aaaaacctag gttggctgtc 840
agagaatata	attagamtgm atctttcatc ayyattacta tggatgaaa ctgcgcaaaa 900
agcaaagcaa	caatttatca agcataatgt tygaytaata tagttaaatt aaatccaagg 960
aaattaatgc	tcacaaatta aataaatact taaggatttt gtgattgttg ttcattttaa 1020
aggaga	1026

<210> 50  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 50	
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taaacaaccc	ccaaataatt atcattccaa caatatctta gtgagctttt tacatctgag 120
aaagcatggg	gtatatTTtag tttaaataaca cctgttgtag gaatgctttg ggctttgctg 180
ctttcaaaaa	tagtggttat ttcatctgaa attctacttc tagggcacia ctactgaaac 240
agaaaataaga	aagagacggg ccagttctta tcatgtttcc atggatttat tggaagatcc 300
tacatcaagg	caaagagcaa tgagtatagc cagtattttg accaacacca tggaagggtat 360
gttaaaagtc	ctgcgtcaca gttacttggt gctttcctaa tgatgaaaaa cacttcataa 420
atttcaataa	aatacttctt gacttgatat tgtatcatta ttacacattt tactaaataa 480
cagtaaaatc	cgtgcataac tcatggattc atatatccca cagatttttt tttttatat 540
ttagcctgta	gaaagctgct gcaaagttaa ggtatatTTg aacaccactt tcataactta 600
a	601

<210> 51

<211> 645  
<212> DNA  
<213> Homo sapiens

<400> 51  
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ctgttcctcc agcagattaa ccataatat cttttaacaa ctttagattt tttaaattcc 120  
ttttaattta aaccaaactc gcttaataga aagtaagcag tttcatgag gattctaact 180  
ttttttcttc cagaacttga agaatccaga cagaaatgcc caccatgctg gtataaattt 240  
gctaatatgt gtttgatttg ggactgttgt aaaccatggt taaagggtgaa acacctgtgc 300  
aacctggttg taatggaccc atttggtgac ctggccatca ccatctgcat tgtcttaaat 360  
acactcttca tggctatgga gcactatccc atgacggagc agttcagcag tgtactgtct 420  
gttggaacc tggtaagcct cactgagagt ttctcttcct cttgaaagag tttataattg 480  
ccttagtgaa ttttacatat tgctctcaaa ttaatatca actaattggc catgtatatc 540  
ttgacatcaa atgttttagca tcccttttaa ataacaaaa aatgttgcta ccatagtgc 600  
aaagagtcaa agaatttatg tacaatttga tttagaattg aattt 645

<210> 52  
<211> 485  
<212> DNA  
<213> Homo sapiens

<400> 52  
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gttgctcaat aattattcgt gtttcaakas tatttgctca tataatgaac tacacttctc 120  
atttaggtct tcacagggat cttcacagca gaaatgttcc tcaagataat tgccatggat 180  
ccatattatt actttcaaga aggctggaat atttttgatg gttttattgt gagccttagt 240  
ttaatggaac ttggtttggc aaatgtggaa ggattgtcag ttctccgac attccggctg 300  
gtaaattaa tgggagtggt cataaaatgt actttrtaat taattagtct tcattctcat 360  
ctagtaaaaa tggcaagatt tcccatcatt ataatatatt tgaatacctt ctaaaacaga 420  
ttggattgcc ataccaccaa atggtagttt cttcttcac atagctttta taaagttcac 480  
ttaaa 485

<210> 53  
<211> 602  
<212> DNA  
<213> Homo sapiens

<400> 53  
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agattttttt agaaatgcag agattaacac tgttcttgct tttatttcca gtcctcagtt 180  
ttcaagttgg caaaatcttg gccaaactcta aatatgctaa ttaagatcat tggcaattct 240  
gtgggggctc taggaaacct caccttggtg ttggccatca tcgtcttcat ttttgctgtg 300  
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gtgctgtgtg gagagtggat agagaccatg tgggactgta tggagggtgc tggccaaacc 480  
atgtgcctta ctgtcttcat gatggtcatg gtgattggaa atctagtggg atgtagcaaa 540  
aacattttcc tcattttcat taaaaataat gtaatcatta aaaagtgttc aactgaagaa 600  
ta 602

<210> 54  
<211> 803  
<212> DNA

<213> Homo sapiens

<400> 54

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agtattattt tatattgacc aagcattttt atttcattca ctttttttca gaatagtgtg 120
tcatgaatta gcagaaatgc atgttagaat aaaataaggt gtcaagaaca atcttagaaa 180
actaatgatg gaaagcaatt gaagcaatag aatgttttga tcacctgttt ttccctgctgt 240
gttttcagggt ctgaacctct tcttggcctt gcttttgagt tccttcagtt ctgacaatct 300
tgctgccact gatgatgata acgaaatgaa taatctccag attgctgtgg gaaggatgca 360
gaaaggaatc gattttgtta aaagaaaaat acgtgaattt attcagaaag cctttgttag 420
gaagcagaaa gcttttagatg aaattaaacc gcttgaagat ctaaataata aaaaagacag 480
ctgtatttcc aaccatacca ccatagaaat aggcaagac ctcaattatc tcaaagacgg 540
aaatggaact actagtggca taggcagcag ttagaaaaaa tatgtcgtgg atgaaagtga 600
ttacatgtca ttataaaaca accctagcct cactgtgaca gtaccaattg ctgttgagga 660
atctgacttt gaaaatttaa atactgaaga attcagcagc gagtcagata tggaggaaaag 720
caaagaggta aatgtttaa taaggagata ttttggtgta tataatctgt gttaaataatc 780
aggtgtttta tgcgtgtctc tgt                                     803
```

<210> 55

<211> 615

<212> DNA

<213> Homo sapiens

<400> 55

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aaaaaaaaata ctatggtggt gtatctaata ttgtgacccc tgacctttac caaagcggat 120
tggcattatg tttaagttct taattacaga tcaagaaaaa tgcatacaga agatgggggg 180
gggcacacct aattaatttt tatatttaga ttaaagaaaa taattaaatg tgtttttttg 240
tgggattgat tttcagaagc taaatgcaac tagttcatct gaaggcagca cggttgatat 300
tggagctccc gccgagggag aacagcctga ggttgaacct gaggaatccc ttgaacctga 360
agcctgtttt acagaagnnn nnnnnnaagc aaaacaataa catatgtggt cttgagtatc 420
ctctttttcta cccatttttt cctattttat taaatgtctg tttatttgtc taccatctag 480
ttcatctatc tatctgtatc tatctatcta tctatctatc tagtaatcat ctatacctat 540
ccaacaactg tacattttatt tgtttttttt ttttgcatth gctgttttgaa aaaaaatgca 600
acgtttttaa ggcaa                                     615
```

<210> 56

<211> 400

<212> DNA

<213> Homo sapiens

<400> 56

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gatagctttt gtaagcggaa gctatcttaa aaattaatgt tatttacaat gtattatcag 60
gtaataatgt aatgaatct cccaccaaca caaatatacc taatcaaaga gtaatttttt 120
gtcttcattt ttttcccaca tatttttagac tgtgtacgga agttcaagtg ttgtcagata 180
agcatagaag aaggcaaagg gaaactctgg tggaaattga ggaaaacatg ctataagata 240
gtggagcaca attggttcga aaccttcatt gtcttcatga ttctgctgag cagtggggct 300
ctggtaggtg atgcatgac cactccttca cctttcatct gaaatctttt ccctttccct 360
tcaatcaact catattaccc acttttaaata taagggtgtt                                     400
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<210> 57

<211> 560

<212> DNA

<213> Homo sapiens

<400> 57

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aaattactga aacccttggg tgactgaaat gccagtcag cagtcattta tgatcagata 60
atgataaagt aaaattcagc catgggaaac attaaacctt ccagccttag gcacctgata 120
agagcttgca tcgtttcctt ttttaagaaa tcatcaatta gagactgttt ctgatcataa 180
aatttaatat aattttttga cttacaggcc tttgaagata tatacattga gcagcgaaaa 240
accattaaga ccatgttaga atatgctgac aagggttttc cttacatatt cattctggaa 300
atgctgctaa agtggggtgc atatgggttt caagtgtatt ttaccaatgc ctgggtgctgg 360
ctagacttcc tgattgttga tgtgagtatg ctgcactttg ctgctttatt cattggcata 420
tatgtaatat ttctagcaat ggtgcctgac acagtgtagg cactcagtaa cactgtatca 480
gcccaaatat aaattatggt tctcatttca cagtgaaggg atgcctcaaa acatttttta 540
ccaatttaaa tacatatata 560
```

<210> 58

<211> 480

<212> DNA

<213> Homo sapiens

<400> 58

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aaattcttag gcctttcccc aaacttacta agtcagactc tgctattggt gtttttaaca 60
agacccctgg gtgattttga aactcatgaa agttcgagaa ttactgattc attgcataga 120
gcaaggctga actgtgtaga cttttttata tgtaaataag aaaattgtgt tgctttttct 180
gtataggtct cactggttag cttaactgca aatgccttgg gttactcaga acttgggtgcc 240
atcaaatccc tcagaacact aagagctctg aggccactga gagctttgtc ccggtttgaa 300
ggaatgaggg taagactgaa tgccttagag tttgtcagaa ttattattga gagcagactg 360
acactttgta ccatggaaat gtcaaattta tggagaattt gtgtcttaca cattcatact 420
gacatagcta atcaatcaaa aataatattt accagatgcc cataatactt ggcactgctg 480
```

<210> 59

<211> 640

<212> DNA

<213> Homo sapiens

<400> 59

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taattttaaa attcttagtt ggagctacca gagtctagtt tctacccaat attcaacttt 60
gaaacagatt tttttaatca tttgactgtt cttttaataa tgtttaaaaa taagtaaata 120
tttgttgttg gcttttctct ttttttctt tctcatcctg tgccagggtg ttgtaaatagc 180
tcttttagga gccattccat ctatcatgaa tgtacttctg gtttgtctga tcttttggct 240
aatattcagt atcatgggag tgaatctctt tgctggcaag ttttaccatt gtattaatta 300
caccactgga gagatgtttg atgtaagcgt ggtcaacaac tacagtgagt gcaaagctct 360
cattgagagc aatcaaactg ccagggtgga aaatgtgaaa gtaaaactttg ataacgtagg 420
acttgatat ctgtctctac ttcaagtagt aagtaatcac tttattattt tccatgatgt 480
gtaattaaaa tgagtctaaa gtttttcttc ctcataatga gatatccacc tgttagaatg 540
gctattatca aacagataaa tgacaataaa tgctggcaag aatgtgaaga aaagggaacc 600
cttgtagatt gttggcaggg atgtaaatta gtatagcttt 640
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<210> 60

<211> 480

<212> DNA

<213> Homo sapiens

<400> 60

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atttgaagta ttttcaatgc atatcgcaaa acattgcccc aaaagtgaat acaaatttca 60
agcttattta tatgcctgta ttgaatacat gtcaaataga attttgatca attattcaat 120
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```

ttatttttcta aaattataat tttgggaaaa aagaaaatga tatgactttt cttacaggcc 180
acgtttaagg gatggatgga tattatgtat gcagctgttg attcacgaaa tgtaagtcta 240
gttagaggga aattgttttag tttgattaaa tgtatatattc tacaatattg taatttagtg 300
atattgtcaa taaaataaaa ttatgtgctt aatttataaa acccatctat attataagga 360
taaaatattt aatcatacta tttctttcaa aattatcata ggatgatttt ctctaatacac 420
tctgtatctt ttaacatatc ttttctagta ttttagcaagg cacctgacac aaaactttat 480

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<210> 61  
 <211> 366  
 <212> DNA  
 <213> Homo sapiens

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<400> 61
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tataatgggtt acaattcttc atattcttta ggtagaatta caacccaagt atgaagacaa 120
cctgtacatg tatctttatt ttgtcatctt tattatTTTTT ggttcattct ttaccttgaa 180
tcttttctatt ggtgtcatca tagataactt caaccaacag aaaaagaaga taagtatatt 240
aaaacttcat ccttgctctg aaatatgaac taaatatTTTc atactctttc ctttagcctc 300
caaaatgcaa tcaccaaaaa aagaatataa aattcagaaa ttattttgag acatttgata 366
atcgat

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<210> 62  
 <211> 560  
 <212> DNA  
 <213> Homo sapiens

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<400> 62
tcgataagct ttttaagcaat taataattca gatagcatgt ttttgatatt tttagtctag 60
aaatatgact aatatggcat aatttatata ttgaataaag gcatctctat aaatacagat 120
attagtaaca atagaatgaa atgtggggagc caattttcac atgattacta aggtggattt 180
tatagccagc aaagaacaca attttaacaa gtgttgcttt catttcttta ctttggaggt 240
caagacattt ttatgacaga agaacagaag aaatactaca atgcaatgaa aaaactgggt 300
tcaaagaaac cacaaaaacc catacctcga cctgctgtaa gaataacata ttttcattgc 360
ctgttaaaac tatattacct aaccgtttca cagcccgaat ttctagaaac tagttatttt 420
tgtggatttg taacacaaaag ttttttacct taacaatggg actagctagc cttaaataagct 480
tgaaaaatgt actttacata tataatatgt ataaattata taatgcataa catattttat 540
atgtaaacat ataaaataca

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<210> 63  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

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<400> 63
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gtttctaattg gaactttttac atattatttg ttccagaaca aattccaagg aatggctctt 180
gattttgttaa ccaaacaagt ctttgatattc agcatcatga tcctcatctg ctttaacatg 240
gtcaccatga tgggtggaac cgatgaccag agtcaagaaa tgacaaacat tctgtactgg 300
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tttaaaactt tagagggtgtt tttcactaat ctttctcatt catcccaaac tcccaataa 540
aaatctaata gtccattgtt ttagtttttag tttgccattt ctctaattgc atgctgtgct 600

```

tgaaatgatg agtggaaatac aaggaattta tattttcagc tttcatttat

650

<210> 64

<211> 3700

<212> DNA

<213> Homo sapiens

<400> 64

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actttcattt	gctactatta	agtataacaa	tattttttgtt	atgtgtgat	tttctacagg	180
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gctgctcttt	gctttgatga	tgtcccttcc	tgcgttgttt	aacatcggcc	tccttctttt	360
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cccatctgtt	gggattttct	ttttgtcag	ttacatcatc	atatccttcc	tggttgtggg	660
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cattgcttga	atccaatgtt	tccacctagt	ctttttattc	agtaatcatc	agtcttttcc	3300
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cagttacagc	aaaatacttt	gtgtttcaca	agcaacaata	aatgtagatt	ctttatactg	3480
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<212> PRT

<213> Homo sapiens

<400> 67

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Pro	Leu	Asn	Pro	Val	Arg	Lys	Ile	Ala	Xaa	Lys	Ile	Leu	Val	His	Ser	115	120	125	
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Thr Gly Glu Phe Val Leu Lys Leu Val Ser Leu Arg His Tyr Tyr Phe  
 1525 1530 1535

Thr Ile Gly Trp Asn Ile Phe Asp Phe Val Val Val Ile Leu Ser Ile  
 1540 1545 1550

Val Gly Met Phe Leu Ala Glu Met Ile Glu Lys Tyr Phe Val Ser Pro  
 1555 1560 1565

Thr Leu Phe Arg Val Ile Arg Leu Ala Arg Ile Gly Arg Ile Leu Arg  
 1570 1575 1580

Leu Ile Lys Gly Ala Lys Gly Ile Arg Thr Leu Leu Phe Ala Leu Met  
 1585 1590 1595 1600

Met Ser Leu Pro Ala Leu Phe Asn Ile Gly Leu Leu Leu Phe Leu Val  
 1605 1610 1615

Met Phe Ile Tyr Ala Ile Phe Gly Met Ser Asn Phe Ala Tyr Val Lys  
 1620 1625 1630

Lys Glu Ala Gly Ile Asp Asp Met Phe Asn Phe Glu Thr Phe Gly Asn  
 1635 1640 1645

Ser Met Ile Cys Leu Phe Gln Ile Thr Thr Ser Ala Gly Trp Asp Gly  
 1650 1655 1660

Leu Leu Ala Pro Ile Leu Asn Ser Ala Pro Pro Asp Cys Asp Pro Asp  
 1665 1670 1675 1680

Thr Ile His Pro Gly Ser Ser Val Lys Gly Asp Cys Gly Asn Pro Ser  
 1685 1690 1695

Val Gly Ile Phe Phe Phe Val Ser Tyr Ile Ile Ile Ser Phe Leu Val  
 1700 1705 1710

Val Val Asn Ser Tyr Ile Ala Val Ile Leu Glu Asn Phe Ser Val Ala  
 1715 1720 1725

Thr Glu Glu Ser Ala Glu Pro Leu Ser Glu Asp Asp Phe Glu Met Phe  
 1730 1735 1740

Tyr Glu Val Trp Glu Lys Phe Asp Pro Asp Ala Thr Gln Phe Ile Glu  
 1745 1750 1755 1760

Phe Ser Lys Leu Ser Asp Phe Ala Ala Ala Leu Asp Pro Pro Leu Leu  
 1765 1770 1775

Ile Ala Lys Pro Asn Lys Val Gln Leu Ile Ala Met Asp Leu Pro Met  
 1780 1785 1790

Val Ser Gly Asp Arg Ile His Cys Leu Asp Ile Leu Phe Ala Phe Thr  
 1795 1800 1805

Lys Arg Val Leu Gly Glu Ser Gly Glu Met Asp Ala Leu Arg Ile Gln  
 1810 1815 1820

Met Glu Asp Arg Phe Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Glu  
1825 1830 1835 1840

Pro Ile Thr Thr Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Ala  
1845 1850 1855

Ile Ile Gln Arg Asn Phe Arg Cys Tyr Leu Leu Lys Gln Arg Leu Lys  
1860 1865 1870

Asn Ile Ser Ser Asn Tyr Asn Lys Glu Ala Ile Lys Gly Arg Ile Asp  
1875 1880 1885

Leu Pro Ile Lys Gln Asp Met Ile Ile Asp Lys Leu Asn Gly Asn Ser  
1890 1895 1900

Thr Pro Glu Lys Thr Asp Gly Ser Ser Ser Thr Thr Ser Pro Pro Ser  
1905 1910 1915 1920

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35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile  
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Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu  
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Met Asn Lys Gly  
85 90 95

Lys Ala Ile Ser Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr  
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Pro Leu Asn Pro Val Arg Lys Ile Ala Xaa Lys Ile Leu Val His Ser  
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe  
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Phe	Thr	Gly	Ile	Tyr	Thr	Phe	Glu	Ser	Leu	Ile	Lys	Ile	Leu	Ala	Arg	165	170	175	
Gly	Phe	Cys	Leu	Glu	Asp	Phe	Thr	Phe	Leu	Arg	Asp	Pro	Trp	Asn	Trp	180	185	190	
Leu	Asp	Phe	Ser	Val	Ile	Val	Met	Ala	Tyr	Val	Thr	Glu	Phe	Val	Ser	195	200	205	
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Lys	Thr	Ile	Ser	Val	Ile	Pro	Gly	Leu	Lys	Thr	Ile	Val	Gly	Ala	Leu	225	230	235	240
Ile	Gln	Ser	Val	Lys	Lys	Leu	Ser	Asp	Val	Met	Ile	Leu	Thr	Val	Phe	245	250	255	
Cys	Leu	Ser	Val	Phe	Ala	Leu	Ile	Gly	Leu	Gln	Leu	Phe	Met	Gly	Asn	260	265	270	
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Thr	Asn	Thr	Thr	Ser	Tyr	Phe	Asn	Gly	Thr	Met	Asp	Ser	Asn	Gly	Thr	290	295	300	
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Asp	Asp	Ser	His	Phe	Tyr	Val	Leu	Asp	Gly	Gln	Lys	Asp	Pro	Leu	Leu	325	330	335	
Cys	Gly	Asn	Gly	Ser	Asp	Ala	Gly	Gln	Cys	Pro	Glu	Gly	Tyr	Ile	Cys	340	345	350	
Val	Lys	Ala	Gly	Arg	Asn	Pro	Asn	Tyr	Gly	Tyr	Thr	Ser	Phe	Asp	Thr	355	360	365	
Phe	Ser	Trp	Ala	Phe	Leu	Ser	Leu	Phe	Arg	Leu	Met	Thr	Gln	Asp	Tyr	370	375	380	
Trp	Glu	Asn	Leu	Tyr	Gln	Leu	Thr	Leu	Arg	Ala	Ala	Gly	Lys	Thr	Tyr	385	390	395	400
Met	Ile	Phe	Phe	Val	Leu	Val	Ile	Phe	Leu	Gly	Ser	Phe	Tyr	Leu	Val	405	410	415	
Asn	Leu	Ile	Leu	Ala	Val	Val	Ala	Met	Ala	Tyr	Glu	Gly	Gln	Asn	Gln	420	425	430	
Ala	Thr	Leu	Glu	Glu	Ala	Glu	Gln	Lys	Glu	Ala	Glu	Phe	Gln	Gln	Met	435	440	445	

Leu	Glu	Gln	Leu	Lys	Lys	Gln	Gln	Glu	Glu	Ala	Gln	Ala	Val	Ala	Ala		
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Glu	Gly	Asn	Asn	Lys	Gly	Glu	Arg	Asp	Ser	Phe	Pro	Lys	Ser	Glu	Ser		
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Glu	Asp	Ser	Val	Lys	Arg	Ser	Ser	Phe	Leu	Phe	Ser	Met	Asp	Gly	Asn		
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Arg	Leu	Thr	Ser	Asp	Lys	Lys	Phe	Cys	Ser	Pro	His	Gln	Ser	Leu	Leu		
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Ile	Phe	Ser	Phe	Arg	Gly	Arg	Ala	Lys	Asp	Val	Gly	Ser	Glu	Asn	Asp		
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Phe	Ala	Asp	Asp	Glu	His	Ser	Thr	Phe	Glu	Asp	Ser	Glu	Ser	Arg	Arg		
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Asp	Ser	Leu	Phe	Val	Pro	His	Arg	His	Gly	Glu	Arg	Arg	Asn	Ser	Asn		
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Gly	Thr	Thr	Thr	Glu	Thr	Glu	Val	Arg	Lys	Arg	Arg	Leu	Ser	Ser	Tyr		
625				630						635					640		
Gln	Ile	Ser	Met	Glu	Met	Leu	Glu	Asp	Ser	Ser	Gly	Arg	Gln	Arg	Ala		
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Val	Ser	Ile	Ala	Ser	Ile	Leu	Thr	Asn	Thr	Met	Glu	Glu	Leu	Glu	Glu		
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Ser	Arg	Gln	Lys	Cys	Pro	Pro	Cys	Trp	Tyr	Arg	Phe	Ala	Asn	Val	Phe		
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690						695					700						
Asn	Leu	Ile	Val	Met	Asp	Pro	Phe	Val	Asp	Leu	Ala	Ile	Thr	Ile	Cys		
705				710						715					720		
Ile	Val	Leu	Asn	Thr	Leu	Phe	Met	Ala	Met	Glu	His	Tyr	Pro	Met	Thr		
			725					730						735			
Glu	Gln	Phe	Ser	Ser	Val	Leu	Thr	Val	Gly	Asn	Leu	Val	Phe	Thr	Gly		
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Ile Phe Thr Ala Glu Met Val Leu Lys Ile Ile Ala Met Asp Pro Tyr  
 755 760 765  
 Tyr Tyr Phe Gln Glu Gly Trp Asn Ile Phe Asp Gly Ile Ile Val Ser  
 770 775 780  
 Leu Ser Leu Met Glu Leu Gly Leu Ser Asn Val Glu Gly Leu Ser Val  
 785 790 795 800  
 Leu Arg Ser Phe Arg Leu Leu Arg Val Phe Lys Leu Ala Lys Ser Trp  
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 Pro Thr Leu Asn Met Leu Ile Lys Ile Ile Gly Asn Ser Val Gly Ala  
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 835 840 845  
 Val Val Gly Met Gln Leu Phe Gly Lys Ser Tyr Lys Glu Cys Val Cys  
 850 855 860  
 Lys Ile Asn Asp Asp Cys Thr Leu Pro Arg Trp His Met Asn Asp Phe  
 865 870 875 880  
 Phe His Ser Phe Leu Ile Val Phe Arg Val Leu Cys Gly Glu Trp Ile  
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 Glu Thr Met Trp Asp Cys Met Glu Val Ala Gly Gln Thr Met Cys Leu  
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 Ala Thr Asp Asp Asp Asn Glu Met Asn Asn Leu Gln Ile Ala Val Gly  
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 Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val Thr Val Pro Ile  
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Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn Thr Glu Glu Phe Ser  
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 1075 1080 1085  
 Ser Ser Glu Gly Ser Thr Val Asp Val Val Leu Pro Arg Glu Gly Glu  
 1090 1095 1100  
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 1125 1130 1135  
 Glu Gly Lys Gly Lys Ile Trp Trp Asn Leu Arg Lys Thr Cys Tyr Ser  
 1140 1145 1150  
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 Thr Tyr Phe Thr Asn Ala Trp Cys Trp Leu Asp Phe Leu Ile Val Asp  
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 1235 1240 1245  
 Gly Ala Ile Lys Ser Leu Arg Thr Leu Arg Ala Leu Arg Pro Leu Arg  
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 Tyr His Cys Val Asn Met Thr Thr Gly Asn Met Phe Asp Ile Ser Asp  
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 Val Asn Asn Leu Ser Asp Cys Gln Ala Leu Gly Lys Gln Ala Arg Trp  
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 Lys Asn Val Lys Val Asn Phe Asp Asn Val Gly Ala Gly Tyr Leu Ala  
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Leu Leu Gln Val Ala Thr Phe Lys Gly Trp Met Asp Ile Met Tyr Ala  
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Ala Val Asp Ser Arg Asp Val Lys Leu Gln Pro Val Tyr Glu Glu Asn  
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Leu Tyr Met Tyr Leu Tyr Phe Val Ile Phe Ile Ile Phe Gly Ser Phe  
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Phe Thr Leu Asn Leu Phe Ile Gly Val Ile Ile Asp Asn Phe Asn Gln  
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Gln Lys Lys Lys Phe Gly Gly Gln Asp Ile Phe Met Thr Glu Glu Gln  
 1425 1430 1435 1440

Lys Lys Tyr Tyr Asn Ala Met Lys Lys Leu Gly Ser Lys Lys Pro Gln  
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Lys Pro Ile Pro Arg Pro Ala Asn Lys Phe Gln Gly Met Val Phe Asp  
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Phe Val Thr Arg Gln Val Phe Asp Ile Ser Ile Met Ile Leu Ile Cys  
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Leu Asn Met Val Thr Met Met Val Glu Thr Asp Asp Gln Gly Lys Tyr  
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Met Thr Leu Val Leu Ser Arg Ile Asn Leu Val Phe Ile Val Leu Phe  
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Thr Gly Glu Phe Val Leu Lys Leu Val Ser Leu Arg His Tyr Tyr Phe  
 1525 1530 1535

Thr Ile Gly Trp Asn Ile Phe Asp Phe Val Val Val Ile Leu Ser Ile  
 1540 1545 1550

Val Gly Met Phe Leu Ala Glu Met Ile Glu Lys Tyr Phe Val Ser Pro  
 1555 1560 1565

Thr Leu Phe Arg Val Ile Arg Leu Ala Arg Ile Gly Arg Ile Leu Arg  
 1570 1575 1580

Leu Ile Lys Gly Ala Lys Gly Ile Arg Thr Leu Leu Phe Ala Leu Met  
 1585 1590 1595 1600

Met Ser Leu Pro Ala Leu Phe Asn Ile Gly Leu Leu Leu Phe Leu Val  
 1605 1610 1615

Met Phe Ile Tyr Ala Ile Phe Gly Met Ser Asn Phe Ala Tyr Val Lys  
 1620 1625 1630

Lys Glu Ala Gly Ile Asp Asp Met Phe Asn Phe Glu Thr Phe Gly Asn  
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Ser Met Ile Cys Leu Phe Gln Ile Thr Thr Ser Ala Gly Trp Asp Gly  
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Leu Leu Ala Pro Ile Leu Asn Ser Ala Pro Pro Asp Cys Asp Pro Asp  
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 Thr Ile His Pro Gly Ser Ser Val Lys Gly Asp Cys Gly Asn Pro Ser  
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 Val Gly Ile Phe Phe Phe Val Ser Tyr Ile Ile Ile Ser Phe Leu Val  
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 Tyr Glu Val Trp Glu Lys Phe Asp Pro Asp Ala Thr Gln Phe Ile Glu  
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 Ile Ala Lys Pro Asn Lys Val Gln Leu Ile Ala Met Asp Leu Pro Met  
 1780 1785 1790  
 Val Ser Gly Asp Arg Ile His Cys Leu Asp Ile Leu Phe Ala Phe Thr  
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 Met Glu Asp Arg Phe Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Glu  
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 Pro Ile Thr Thr Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Ala  
 1845 1850 1855  
 Ile Ile Gln Arg Asn Phe Arg Cys Tyr Leu Leu Lys Gln Arg Leu Lys  
 1860 1865 1870  
 Asn Ile Ser Ser Asn Tyr Asn Lys Glu Ala Ile Lys Gly Arg Ile Asp  
 1875 1880 1885  
 Leu Pro Ile Lys Gln Asp Met Ile Ile Asp Lys Leu Asn Gly Asn Ser  
 1890 1895 1900  
 Thr Pro Glu Lys Thr Asp Gly Ser Ser Ser Thr Thr Ser Pro Pro Ser  
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agctagggttc actgatgtat agaatctttt tctacattta gatattttctt gcaaagtgtt 240  
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<212> DNA

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agaatttttt aaatgctttt aaaaaatgga caaaattata gatattcttg agtttaaata 180
taatgtttat atattatata tactgtacat tgtagaatgg ctaaatcaaa ctaattaaca 240
ttaagtacag acttttgata gatttatgaa cttggcttat tgagaatgag gttgaatgat 300
gatgttttca agttcaaatg tgtagtgagc tactaaaagc atgacttaat gtttatagct 360
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cctaactctt gtgcaatttt tctttttatt gcaggtaatt cgtatgcaag aagctacacg 480
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atttttatca caatataata aaacaaacat ttataagaaa tgaagtcaag agttgggttac 960
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<211> 433

<212> DNA

<213> Homo sapiens

<400> 73

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tgtaacyata tggttaattta aacatctaac atgtttgtag ttatgatata tcaactgggtt 60
taaacaacc agtttgaaca aacaaattcy attttttaaa aaggtcctca tgtatgtaag 120
ctccttaaat aagcccatgt ctaatttagt aattttactc gtattttctg tttcagactt 180
ttatagtaat gaataaagga aaggcaattt cccgattcag tgccacctct gccttgata 240
ttttaactcc actaaaccct gttaggaaaa ttgctabsaa gattttggta cattcatatc 300
cttttaatgt gaattgccta aatgctattt ctaacagttg attttaaaaga aaatgtcagt 360
tatattttca agtatctgta aaatttcttt gagattaatg gtaacattgt tagtttaatt 420
catttatttg cat 433
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<210> 74  
<211> 450  
<212> DNA  
<213> Homo sapiens

<400> 74  
gagtgcacca aggccatata acaggctttg aagtttctta ttattttatc attgttttaa 60  
aacaaataat attaatattca cagtttttgc atcgataaac ttttttgtgt gttttggatc 120  
atttataaat ggccatggta acctactaac atttattcct taactataat ctactttatt 180  
cagcatgctt atcatgtgca ctattttgac caactgtgta tttatgacct tgagcaaccc 240  
tcctgactgg acaagaatg tagagtaagt aggaataact tctgggaatg agaaatgcac 300  
actcaaattc tctagcaatc tccttgtggg tatagcctga cttatggttt ccacttctgt 360  
ctaagaaaag ttattttcat aatatgcagc cggttaaggga ggtctttcgg gggagctatt 420  
cttctacgag gtaagtattt tcccacaaaa 450

<210> 75  
<211> 701  
<212> DNA  
<213> Homo sapiens

<400> 75  
aaaatttacc atttgyggct ttccattaca tttctatcag ataactctgc gctagtaggt 60  
caaactagat gattatccat aagatacatg aaactattat tctaaaaccc aaatagttaa 120  
accagattag attcctaaag aatataattt ctcttcagtt taactctttg ctcaggcttg 180  
taaaactaac taaatgaata gattatttgg taaatagaag taaggaacaa tattttaatg 240  
aattgaaaaa ccacaaaagg ataggatttg ctatgattga aaacatttat tttaacagtt 300  
caagcaaaat tgtaattttt ggcttggatg tttttcctag gtacacattc actggaatct 360  
atacctttga gtcacttata aaaatcttgg caagagggtt ttgcttagaa gattttacgt 420  
ttcttcgtga tccatggaac tggctggatt tcagtgtcat tgtgatggcg tgagtaactt 480  
tgaaaatttg ataagcgcaa aggagtgaag atagtcatag tacaacaag gtctttgtgt 540  
catatattaa atgtagagct ttcttgtag tcaagttaac tatatgggtt gtgtattttc 600  
agaatacata ttagaataca tattgcaatg taaatatatc cagtaaatga tcaataaatg 660  
gggttatctt catgtcatat agtctttctc ttcataaaaa t 701

<210> 76  
<211> 286  
<212> DNA  
<213> Homo sapiens

<400> 76  
atttgttaaa ctcacagggc tctatgtgcc aaaccagca ttaagtcctt atttagtata 60  
aactttgcc aactatcag taactctgat ttaattctgc aggtatgtaa cagaatttgt 120  
aagcctaggc aatgtttcag cccttcgaac tttcagagtc ttgagagctc tgaaaactat 180  
ttctgtaatc ccaggtaaga agaaactggg gtaaggtagt aggcccctta tatctccaac 240  
ttttcttgtg tgttattgtg tttgtgtgtg aactccccta ttacag 286

<210> 77  
<211> 515  
<212> DNA  
<213> Homo sapiens

<400> 77  
gtaagaagaa actggtgtaa ggtagtaggc cccttatatc tccaactttt cttgtgtgtt 60

```

atttgtgtttg tgtgtgaact cccctattac agatatgtga cagagtttgt ggacctgggc 120
aatgtctcag cgttgagaac attcagagtt ctccgagcac tgaaaacaat ttcagtcatt 180
ccaggtgaga gctagggttaa acaccgaggt tgactttaat tattgagttt gaaatcaatt 240
tatatgactt acagcattag ccttggttgc tattattaca gtccatcccg gtaaataatg 300
ccaaatgatg tttcaatgtc agtttagctc ctaaaatttt ataaattaca tgcgtattta 360
taaagtcagc ctttgagttt aacagaaaat tgcattgagac atcttcaaaa aatgctaatt 420
tgggcctctt gcgctctctc tctctctttt tcactacccat ggctttacta acagatttgg 480
atthttaccat tgcgtgcaga tgtagttcaa aaatg
515

```

<210> 78  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

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<400> 78
aaacttcctg actagatatt taaaccttca tattgaattt ccagcaagca cactgttcat 60
gtgtaaaaatc tgctgttcat ctatttccca aatcatcagg ctatccatac agctttgggtg 120
tctaaatagt caagcaatca tttatggggg aaagagaatg tgtgtgacta ttaagaaatc 180
atgattttctg gcactcttcc tcaggtaacc tatagttctc tctctgcagg tttaaagacc 240
attgtggggg ccctgatcca gtcggtaaag aagctttctg atgtgatgat cctgactgtg 300
ttctgtctga gcgtgtttgc tctcattggg ctgcagctgt tcatgggcaa tctgaggaat 360
aaatgtttgc agtggccccc aagcgattct gcttttgaaa ccaacaccac ttcctacttt 420
aatggcaciaa tggattcaaa tgggacattt gttaatgtaa caatgagcac atttaactgg 480
aaggataaca ttggagatga cagtaagaag tattacatta tgttaacctt agtgttgctg 540
aatgaatttt caactataaa tagt
564

```

<210> 79  
 <211> 497  
 <212> DNA  
 <213> Homo sapiens

```

<400> 79
tgagactgtg ggtgtacagc cacctttgta aataactgaa atagtccaac tctgatttat 60
tactaatact aatgtgaata ggattaatat gaaataaaat ggggtttttt ttgtattaac 120
aggtcacttt tatgttttgg atgggcaaaa agacccttta ctctgtggaa atggttcaga 180
tgcagggtaa gaaacataat atatatTTTT aagatataga actctttgcg aaaaaaaaaa 240
gtaggttaga aaacaactac atgggtatat gtgtagcctt accatgtatg caataaagag 300
cagtgtctgt cccctaggaa gtgccttgtc tgccttaccg gattgccact ggtcctaaac 360
tcacagcaat taaaaattat ccctttgtga agacctttcc ccaaaatttc acagttaaga 420
tgttcttaaa ttgatgtctc aatgtgtgaa ggcccagagt ctgtctttgc tgtacatcta 480
tcagagctgt taggaaa
497

```

<210> 80  
 <211> 501  
 <212> DNA  
 <213> Homo sapiens

```

<400> 80
aaagagtaaa aatatggtaa ggtcagagcc aaaagtgtgt ggttgctagc tttctgccat 60
tctaaatgtc trwaaawatt tatttgcatc taaattttct atcgggtcttc ctagtgaatt 120
tcatctgata agtttcacgg tgggcaatca cctaaagtgt tctggaaatt aaagcaagat 180
aattcgtcac agatagcagc tttgggtttt gaaaattcct ataagtcaaa taaattgaaa 240
ttgctgtaat ttctaaactg accctacctc catttctctc tcttatagcc agtgtccaga 300
aggatacatc tgtgtgaagg ctggtcgaaa ccccaactat ggctacacaa gctttgacac 360

```

```

ctttagctgg gctttcctgt ctctatctcg actcatgact caagactact gggaaaatct 420
ttaccagttg gtaaggtcca aatgagcatg cataacattt atttttatag acatgtatga 480
aatgaaaagc ataggctgag t                                     501

```

```

<210> 81
<211> 432
<212> DNA
<213> Homo sapiens

```

```

<400> 81
agctaattag tctactgact atctaactgt ggtaatcaga tattttatttg gggacattat 60
actaaaatac tgatggaatt atccccatt tcccctagac attacgtgct gctgggaaaa 120
catacatgat attttttgtc ctggtcattt tcttgggctc atttttatttg gtgaatttga 180
tcctggctgt ggtggccatg gcctatgagg ggcagaaatca ggccaccttg gaagaagcag 240
aacaaaaaga ggccgaattt cagcagatgc tcgaacagct taaaaagcaa caggaagaag 300
ctcaggtact gagtgataaa mgcaaagatt tatcattatt attmttagtt tctaagtaga 360
aatagtgtta tactatagag ggtagattgg aactgctttt tcattttata tatmggcatt 420
gtcattagac ac                                     432

```

```

<210> 82
<211> 489
<212> DNA
<213> Homo sapiens

```

```

<400> 82
tgcaaactgt tttcaaagct ctgtgttcta aatagtgcct ggctttgttt tatgacaggc 60
agttgcgcca gcatcagctg cttcaagaga tttcagtgga atagggtgggt taggagagct 120
gttggaagat tcttcagaag catcaaagtt gaggttccaaa agtgctaaag aatggaggaa 180
ccgaaggaag aaaagaagac agagagagca ccttgaagga aacaacaaag gagagagaga 240
cagctttccc aaatccgaat ctgaagacag cgtcaaaaaga agcagcttcc ttttctccat 300
ggatggaaac agactgacca gtgacaaaaa attctgctcc cctcatcagg tatgattttc 360
tactaagtgc tctgttttct ttgtcattgc tattgctttt tagtttttgt attttgtttt 420
ggtacacttt tgtactatct gtacttcagt tgagggacag ggaactaaca tttaatatag 480
ttgttttaa                                     489

```

```

<210> 83
<211> 653
<212> DNA
<213> Homo sapiens

```

```

<400> 83
gtgaagacta aatgaagtgg ttgtatactt agtaaatgtc aaatcagtat tgttagtcag 60
aaaaacactc tttgtactta aatttgcttt aataaaaaata tcaaaatata tgtgtcctct 120
ataaatattga ttatccatgt ttaagggcaa gagtatacta actccaaaga aaacagatcc 180
tttaatatata atatttatta aataattgag ttcttcccct acccccatcc cattcctttc 240
ctttttgctt tctctgcagt ctctcttgag tatccgtggc tccctgtttt cccaagacg 300
caatgcaaaa acaagcattt tcagtttcag aggtcgggca aaggatgttg gatctgaaaa 360
tgacttttgc gatgatgaac acagcacatt tgaagacagc gaaagcagga gagactcact 420
gtttgtgccc cacagacatg gagagcgacg caacagtaac gttagtcagg ccagtatgtc 480
atccaggatg gtgccagggc ttccagcaaa tggggaagat gcacagcact gtggattgca 540
atggtgtggg ttcttgggtg ggtggacctt cagctctaac gtcacctact gggcaacttc 600
cccagagggtg ataatagatg acctagctgc tactgacatt attcaccaat ttg                                     653

```

<210> 84  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<400> 84  
 gaattctctt aaaggtacta cctgtgatac tttttttaa aaaaaactgt ttataactta 60  
 gcaataattc aatattttat tcttgaaatt cttacctgga aaattgcatg tagcatgatt 120  
 tgcaaagaaa tgctatgtgg tgttgatatta cttattggga agagtgggtt gagccatcag 180  
 tatttggttt gcagggcacc accactgaaa cggaagtcag aaagagaagg ttaagctctt 240  
 accagatttc aatggagatg ctggaggatt cctctggaag gcaaagagcc gtgagcatag 300  
 ccagcattct gaccaacaca atggaaggta agagcaggtc atggaacagc caactttctg 360  
 tgattatgtg ctttgtgaac tattccttct tttcatagaa ttactgaagt ctgttaccga 420  
 gatcgaacta tatattagac ctaagaatgt gatatatggt gtacattatc acattgntta 480  
 caaaactaat attggcctta ttctttttga cttgggtcct taccttactt gcagagtgat 540  
 atttcaacac ttgatattat atcaat 566

<210> 85  
 <211> 748  
 <212> DNA  
 <213> Homo sapiens

<400> 85  
 tagtcatttt aaaagcaaaa tattaaattc aaagtgccta ttttctgtat tcaaaagaga 60  
 aaaaagtcca tctatatgac attttaatta acattttctg aaaatattta atgggattgt 120  
 cttctcaagt ttcttaagta atatgaactt ctattttcaa atataagcat caattttggt 180  
 aaataatgta aaatctacta gcaataataa ctcatTTTTg ttgttattta ctactcttcc 240  
 ttgttattgt cctccagaa cttgaagaat ctagacagaa atgtccgcca tgctgggtata 300  
 gatttgccta tgtgttcttg atctgggact gctgtgatgc atgggttaaaa gtaaaacatc 360  
 ttgtgaattt aattgttatg gatccatttg ttgatcttgc catcactatt tgcattgtct 420  
 taaataccct ctttatggcc atggagcact accccatgac tgagcaattc agtagtgtgt 480  
 tgactgtagg aaacctggta agtacatttg aagtttactt atttactttg gtagatgtgg 540  
 gagagataga ccaaagggaa agatgtatgt gtgtgtgtgt gaacccaaaa attatatact 600  
 ctttctcat agaaagaaat atctaaggaa tattacaggg aatctcagag atacagccta 660  
 aaactcaact ggtatgaatg ctgattgttt aggccaatgt ctgtgctgat tgatcatggt 720  
 gtcttaccag ttgtaaacgt ctcaaaat 748

<210> 86  
 <211> 664  
 <212> DNA  
 <213> Homo sapiens

<400> 86  
 ctaagacttg aattgatttg tcactattct ctacttttaa attttagata tttttattcc 60  
 tgtctaattg tcttctttat aaattcgtgt agcatcagtg ttttcagtg tcttgatagt 120  
 agtgctgatc tctaattttt taggtcttta ctgggatttt tacagcagaa atgggtctca 180  
 agatcattgc catggatcct tattactatt tccaagaagg ctggaatata tttgtggaa 240  
 ttattgtcag cctcagttta atggagcttg gtctgtcaaa tgtggaggga ttgtctgtac 300  
 tgcatcatt cagactggta tctatttata tatatccctg tcgctcattg gcacaacatt 360  
 tattttgaaa ttgaatcaat gtatatattat ataattatta attttaattt taaatttaca 420  
 tcaatatgtg acattctaag aaaacatgta aacatccyct ttaaagctaa accattttct 480  
 aagaatgatg aaagcattca aaatactcta taatgattag gtatgtaggg cacattagaa 540  
 aacctacaag tactttctaa aactgtgttt taagtttatg aagctttttt ggccttacag 600  
 tctgtaaaga tacgcaaata aaaatttaga cccagtttaa ttttagcttt ttattaacct 660  
 tact 664



<210> 87  
 <211> 750  
 <212> DNA  
 <213> Homo sapiens

<400> 87  
 tattttttatt tttgcactta aatgatatta tgaccagatt tacaattcta atattgttaa 60  
 cactattttt tctggatttg aaattgaatc agttcagtat attttgagtt ttacatcta 120  
 ccacgtgtgg ttctatgata ccacatacta ataaaaataat gtctaaaatt atattatgat 180  
 tactactaac agcatctttt cacttgatta cagcttagag ttttcaagtt ggcaaaatcc 240  
 tggcccacac taaatatgct aattaagatc attggcaatt ctgtgggggc tctaggaaac 300  
 ctcaccttgg tgttgccat catcgtcttc atttttgctg tggtcggcat gcagctcttt 360  
 ggtaagagct acaaagaatg tgtctgcaag atcaatgatg actgtacgct cccacgggtg 420  
 cacatgaacg acttcttcca ctccttcctg attgtgttcc gcgtgctgtg tggagagtgg 480  
 atagagacca tgtgggactg tatggaggtc gctggccaaa ccatgtgcct tattgttttc 540  
 atgttggtca tggtcattgg aaaccttgtg gtatgtatgt agtacaaatg ctcataaatt 600  
 agaacaagag cagacagtag ctaggaacgt ggccagatgt agtaaacata tctctggttt 660  
 atagtaagtg gcctagactg aaatccccct attagcactc agagaataag caagttattt 720  
 aacttctcct gggctctggt ttcccatatt 750

<210> 88  
 <211> 768  
 <212> DNA  
 <213> Homo sapiens

<400> 88  
 ccttagagca ggatattagg tccttttaaag agtgtgtgac ttagacatgg catctgaaat 60  
 atagtaagca ttcaataaac atttgttgaa ataatttttag caaagatcta tgagttccct 120  
 ttttaggctg ttatttaaag gcataattca atattaarat aggcattttt ctttttttct 180  
 ttttaggttc gaacctcttt ctggccttat tgttgagttc atttagctca gacaaccttg 240  
 ctgctactga tgatgacaat gaaatgaata atctgcagat tgcagtagga agaatgcaa 300  
 agggaattga ttatgtgaaa aataagatgc gggagtgttt ccaaaaagcc ttttttagaa 360  
 agccaaaagt tatagaaatc catgaaggca ataagataga cagctgcatg tccaataata 420  
 ctggaattga aataagcaaa gagcttaatt atcttagaga tgggaatgga accaccagt 480  
 gtgtaggtag tggaagcagt gttgaaaaat acgtaatcga tgaaaatgat tatatgtcat 540  
 tcataaacia cccagcctc accgtcacag tgccaattgc tgttgagag tctgactttg 600  
 aaaacttaaa tactgaagag ttcagcagtg agtcagaact agaagaaagc aaggaggtaa 660  
 ggaatgcttt taaatttttt gttccatttc ctatgataac catgtactac agttatttac 720  
 tattttcatt gtgcttatat gcattatcga aaagcaatga ttgtaagt 768

<210> 89  
 <211> 471  
 <212> DNA  
 <213> Homo sapiens

<400> 89  
 taattattag tacataatga tcagtaatgc taatagagtt aaatgctatc actacatttt 60  
 ttttcacaca atgacacagt atttcccagt tagttaaata aaagggggaa aatcacatct 120  
 ttgaaatggg attttgtttc cagaaattaa atgcaaccag ctcatctgaa ggaagcacag 180  
 ttgatgttgt tctaccccga gaaggtgaac aagctgaaac tgaacccgaa gaagacctta 240  
 aaccggaagc ttgttttact gaaggtaaac aagctctgat gtgattaaat acaatctccc 300  
 cttgttcttt acggagactg aatatgcctc atttaaaaaa aaaaatttag caaacgaggt 360  
 gtgggtggctt atgcctgtaa ccccaaaatt ttgggaggct acggtaggag gattgcttga 420

ccccaggagt ttgagaccac cctgggaaat gtagtaaggc tttgcctcta c

471

<210> 90  
<211> 623  
<212> DNA  
<213> Homo sapiens

<400> 90  
gaattctaag tagctggctg agtatataag tctgagaata attcattata caggagggat 60  
gctgacgata actaggaaat gaaggagatg gttaccctat gaaatgatta cctggaagtg 120  
gagtggggaa ggggcaagaa agtttatttt ttccatttta agattaaaat atatttttta 180  
attaactata ttttsattttt aggatgtatt aaaaagtttc cattctgtca agtaagtaca 240  
gaagaaggca aagggaagat ctggtggaat cttcgaaaaa cctgctacag tattgttgag 300  
cacaactggg ttgagacttt cattgtgttc atgatccttc tcagtagtgg tgcattggta 360  
agtgaatgc atattggcaa gaatcagatt ctggtgaaat agttttattct ccaaaattac 420  
cagatgcaaa cactgagctt cagaatcaaa agaaaaggca tatctgtgtc ttgcagagct 480  
tggcacccaa ggtttaacga tgcaaaattc agttctgaac aaatcagcac catgaaacag 540  
ccagatggaa tttctcatct ggtgtttatc taacagatgt tttcctcact gagacaacca 600  
tttcgagaga cattctgtaa cca 623

<210> 91  
<211> 520  
<212> DNA  
<213> Homo sapiens

<400> 91  
ctagttagtc ttttagatttg tctcatgttc aatgtttatg taaaatatca ataatacaaaa 60  
ttattctttt gtactcacta ttatactaag caattttttc aaatatattag aagaagcaag 120  
ccatttaagt aaaataaaat atttttgatt cataggcctt tgaagatata tacattgaac 180  
agcgaaagac tatcaaaacc atgctagaat atgctgacaa agtctttacc tatatatcca 240  
ttctggaaat gcttctcaaa tgggttgctt atggatttca aacatatattc actaatgcct 300  
ggtgctggct agatttcttg atcgttgatg taagtatttt aagtgatttt tataaaattg 360  
tttttaaaag aggcaagttt gacatttcat atgtttctgt tattaaaact ttcactaata 420  
atgacataat tatgcagtta tttaaacaaa actgtaacat atgcaacaat gaggaatatc 480  
tcatgggaaa gagtagagga ggtcctaaac atgggcagtg 520

<210> 92  
<211> 595  
<212> DNA  
<213> Homo sapiens

<400> 92  
ctaactaata atttaagcac acatccatga aggatctggc attgaactca atcctgaatt 60  
atcagtggta tatgcacaag ttgaaaaggg gtccatggta taaaatatct aactggagat 120  
attgacacgt gttgataaat atgggcaagt attctggttt cattggttta aaaaaagcaa 180  
tagtatgaga tgagactggc aatataagat gacccacta tgtggaagat gaaagttgca 240  
aaggatatgc caaatttagta tttagtctgc attaaataga taccacacc tataccttca 300  
gtcaacagtt tatttcttgg tgaactaatt aatttttttt tccttttgta ggtttctttg 360  
gttagcctgg tagccaatgc tcttggttac tcagaactcg gtgccatcaa atcattacgg 420  
acattaagag ctttaagacc tctaagagcc ttatcccgtt ttgaaggcat gagggtaaga 480  
agaatagaca ctctaattat tcatgtcaaa aattacatgt aggtaatgat ttagatagaa 540  
aagggtgcc a tactcttctg atattttatt caatagaaat tacagaatta gaagc 595

<210> 93  
<211> 787  
<212> DNA  
<213> Homo sapiens

<400> 93  
ccagcataca aacatttttct gactccatct tactatacca ggttttttaat gattttctttt 60  
catactgtag catatttttgc tttccttaaa accttagctc ttttagttgtg tcattgtttg 120  
ttttccttca aatatgtgct agaaaaatta gaagaaacaa cttgtccacc tagattttta 180  
tttaactctt ttcaagcaca tattaatact aaacaaatac attgaaggaa tggtttccat 240  
tcaaaagggt tgtaagctat gttccctctg ctgtctcttc taggtggttg tgaatgctct 300  
tggttgagca attccctcta tcatgaatgt gctgttggtc tgtctcatct tctggttgat 360  
ctttagcatc atgggtgtga atttgtttgc tggcaagttc taccactgtg ttaacatgac 420  
aacgggtaac atgtttgaca ttagtgatgt taacaatttg agtgactgtc aggctcttgg 480  
caagcaagct cggtggaata acgtgaaagt aaactttgat aatgttggtc ctggctatct 540  
tgcactgctt caagtggtaa gtggctactg tacgagtttt gaaaaagttt tcaagatgtt 600  
tcaaggaaga ttatttccct gatgttcttc gtttgaatga ctaacatttg acagcatgaa 660  
aaaaagttaa tgataacacc tataatatca gcttgaattg atcataaaaa agatgttaca 720  
attattttat aatgtatttt ccttagtggt aagcttttag tatgttttaa tgtgatttta 780  
tatttct 787

<210> 94  
<211> 438  
<212> DNA  
<213> Homo sapiens

<400> 94  
aaaggaaaca agttccagac tttaaatata aatgtttttc tatttcaatt ttatttcaat 60  
ctcttgatat gaaatttcac aatattgtac aaaaagttat ttgttataat actgtcagat 120  
tttcatctgg ttaaatgtca ttgttaggtg aaatttttat gaacaattca aatatatgtt 180  
atttacaggc cacattttaa ggctggatgg atattatgta tgcagctgtt gattcacgag 240  
atgtaagtat cactcaaata ttatttatag gttctagatt tcttatgggt aatattgggt 300  
gtaattttaa cactgatata tccaaaattc tatattagaa catttaatat tgcataataa 360  
aaatgaacag tctgcttcaa tatagatgat gcttgattaa tgtgtgccta atatacaata 420  
tgtagcta atgaacg 438

<210> 95  
<211> 637  
<212> DNA  
<213> Homo sapiens

<400> 95  
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actagatcat actagtttta aaaaattgtt tttgtagaac aatatctcag ggtaaggcaa 120  
aagtagcact gtattaagta acagcactca ataaattact gatttagtgt aagtatttat 180  
agtatttttc atattattta atattttcaa tatcatttag gttaaacttc agcctgtata 240  
tgaagaaaat ctgtacatgt atttatactt tgtcatcttt atcatctttg gggtattctt 300  
cactctgaat catttcattg gtgtcatcat agataacttc aaccagcaga aaaagaagat 360  
aagtattctt tagcttttac ctttcttcat tctgggggtc tgtctgttaa tacagccaaa 420  
taaccagaat acctgtggtc atgacagact taaatcatgt ttatattatt ttcagttgcc 480  
catgtgggta ttttaagctgc agggattcca gcctctagtc agtggctcct ctcaaagttt 540  
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tctccagtgc tttagcttgg cttacagagc ctttcag 637

<210> 96  
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<400> 96  
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tttatgtacg taaggatttt gcataatatt aagatattca gaatttcaca taaatgggaa 120  
aagcaggata aatgtatatg taggaggata atatccactt aaaaattaga aaagattaaa 180  
ggaaagacaa atattttttg tgaaagtact attggaacac agaattgtaa ccagttttat 240  
actatgtctt tactttggag gtcaagacat ctttatgaca gaggaacaga aaaaatatta 300  
caatgcaatg aagaaacttg gatccaagaa acctcagaaa ccataacctc gcccagcagt 360  
aagaattact tgtctccttt aatgttccaa agccatgctt ccatatgggtc aaattgagca 420  
atgctctgga gcagaacata ttaggtgata tcaccaatat tgagccctaa ttataaagtt 480  
catattttgc atcataattc acaacttctg cactcattag gagttaccac attccaaaaa 540  
aaggaggtaa tgttctttat aatttgtgag ttgaaaactt ctagctcagg gttcctaata 600  
aatacttcca aagcaaggtt cactttcctg ctaccaa 637

<210> 97  
<211> 759  
<212> DNA  
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<400> 97  
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gaagagaaaa aaagcacaca aaattgtttg gggtaatatg aggagggtgc acatccatcc 120  
cgtatgtgga agggctttat ctacaatttt actgcattat tctttatgaa atatatatag 180  
taaccttatt tctcttctct cactttctag aacaaattcc aaggaatggt ctttgatttt 240  
gtaaccagac aagtctttga tatcagcatc atgatcctca tctgcctcaa catggtcacc 300  
atgatggttg aaacggatga ccagggcaaa taccatgacc tagttttgtc ccggatcaac 360  
ctagtgttca ttgttctggt cactggagaa tttgtgctga agctcgtctc cctcagacac 420  
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ggtaagaaca gcttaattac caagaggtat agttacagag aaacagttgc cccaggacct 540  
tctagctgat taacatggaa attaggtctg agaataataa tgcatataga tgtaaagttc 600  
aacactagca tatttgaata aaaactctga aacctgggtt tattcacaaa gctaactagt 660  
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<210> 98  
<211> 3975  
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attatctgtt tagctgtgtt ctatgttttc cataggatat tttctggctg agatgataga 180  
aaagtatttt gtgtccccta ccttgtttccg agtgatccgt cttgccagga ttggccgaat 240  
cctacgtctg atcaaaggag caaaggggat ccgcacgctg ctctttgctt tgatgatgtc 300  
ccttcctgctg ttgtttaaca tgggcctcct gctcttctctg gtcattgttta tctatgccat 360  
ctttgggatg tccaactttg cctatgttaa aaaggaagct ggaattgatg acatgttcaa 420  
ctttgagacc tttggcaaca gcatgatctg cttgttccaa attacaacct ctgctggatg 480  
ggatggattg ctagcaccta ttcttaatat tgcaccaccc gactgtgacc ctgacacaat 540  
tcaccctggc agctcagtta agggagactg tgggaaccca tctgttggga ttttcttttt 600  
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cagatgttat	cttttaaaagc	aaaggttaaa	aaatatatca	agtaactata	acaaagaggc	1140
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gaactccact	ccagaaaaaa	cagatgggag	ttcctctacc	acctctcctc	cttcctatga	1260
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tgccaaactg	actgttttaa	caaatactca	tagtcagtgc	ctatacaaga	cagtgaagtg	1500
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ccaactatgg	ttgcctcaat	ataacctttt	attcatagat	gttttttttt	attcaacttt	3060
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cataaggtat	taatgatata	gttattgaga	atttatatta	actttttttt	caagaacctt	3840
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oligonucleotide

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<210> 100  
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oligonucleotide

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<210> 101  
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<220>  
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oligonucleotide

<400> 101  
ggcgatgtaa tgtaagggtgc tgtc 24

<210> 102  
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<212> DNA  
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oligonucleotide

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<210> 104  
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<220>  
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<400> 104  
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<210> 105  
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<220>  
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<210> 106  
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<220>  
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<400> 106  
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<210> 112



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oligonucleotide

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24

<210> 117  
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oligonucleotide

<400> 117  
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19

<210> 118  
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oligonucleotide

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23

<210> 119  
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oligonucleotide

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aggcagcaga acgacttgta ata

23

<210> 120  
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oligonucleotide

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24

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24

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24

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24

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22

<210> 125  
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18

<210> 126

<211> 24

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24

<210> 127

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<212> DNA

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24

<210> 128

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<212> DNA

<213> Artificial Sequence

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atccgggatg acctactgg

19

<210> 129

<211> 24

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oligonucleotide

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<210> 134  
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 <400> 141  
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 <210> 142  
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atgtgccatg ctggtgtatt tc 22

<210> 143  
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oligonucleotide

<400> 143  
cacccatctt ctaatcacta tgc 23

<210> 144  
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<400> 144  
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<210> 145  
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oligonucleotide

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gcagccactg atgatgataa 20

<210> 146  
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oligonucleotide

<400> 146  
ctgccagttc ctataccact t 21

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24

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23

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24

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<p>&lt;220&gt;          &lt;223&gt; Description of Artificial Sequence: synthetic                    oligonucleotide</p>	
<p>&lt;400&gt; 197          agtgcagtga actgacacaa tcac</p>	24
<p>&lt;210&gt; 198          &lt;211&gt; 23          &lt;212&gt; DNA          &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;          &lt;223&gt; Description of Artificial Sequence: synthetic                    oligonucleotide</p>	
<p>&lt;400&gt; 198          cttgcgttcc tgtttggtc tct</p>	23
<p>&lt;210&gt; 199          &lt;211&gt; 22          &lt;212&gt; DNA          &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;          &lt;223&gt; Description of Artificial Sequence: synthetic                    oligonucleotide</p>	
<p>&lt;400&gt; 199          tccgcttctt taccagggaa tc</p>	22
<p>&lt;210&gt; 200          &lt;211&gt; 24          &lt;212&gt; DNA          &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;          &lt;223&gt; Description of Artificial Sequence: synthetic                    oligonucleotide</p>	
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<400> 205  
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<210> 206  
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<400> 206  
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<400> 208  
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19

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<210> 213  
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22

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24

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24

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24

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<210> 238  
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oligonucleotide

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20

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<210> 246  
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<400> 248  
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<210> 249  
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24

<210> 250

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23

<210> 251

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24

<210> 252

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24

<210> 253

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oligonucleotide



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<400> 262  
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<210> 263  
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<210> 264  
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<210> 266  
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<210> 267  
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oligonucleotide

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<210> 268  
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<210> 269  
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oligonucleotide

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<210> 270  
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<210> 271  
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24

<210> 272  
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24

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25

<210> 274  
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<400> 274  
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23

<210> 275  
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<210> 281  
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<400> 281  
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<210> 283  
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oligonucleotide

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<210> 284  
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<210> 285  
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<400> 285  
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<210> 286  
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<400> 286  
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<210> 287  
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<220>  
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<400> 287  
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<210> 288  
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<220>  
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 oligonucleotide



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<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 289  taatgtgcct gtaaattgttc cataga</p>	26
<p>&lt;210&gt; 290  &lt;211&gt; 26  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 290  caggcttctt agaaaggact gatagg</p>	26
<p>&lt;210&gt; 291  &lt;211&gt; 20  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 291  gtcccagcag catgactatc</p>	20
<p>&lt;210&gt; 292  &lt;211&gt; 22  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
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 tcttgcctat gctgctgtat ctta 24  
  
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 <210> 297  
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oligonucleotide

<400> 297

ttcttcatgt cattaagcaa tagg

24

<210> 298

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 298

ttcaatttaa aagtgctagg aaca

24

<210> 299

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

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oligonucleotide

<400> 299

cttcaggtgg atgtcacagt cacta

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<210> 300

<211> 24

<212> DNA

<213> Artificial Sequence

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24

<210> 301

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 301

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24

<210> 302  
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 <210> 305  
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oligonucleotide

<400> 306

gatctttgtc agggtcacag tct

23

<210> 307

<211> 9

<212> DNA

<213> Homo sapiens

<400> 307

tacaaagaa

9

<210> 308

<211> 9

<212> DNA

<213> Homo sapiens

<400> 308

tacagagaa

9

<210> 309

<211> 9

<212> DNA

<213> Homo sapiens

<400> 309

tacagagaa

9

<210> 310

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 310

tgtgtccgcc agtagatgg

19

<210> 311

<211> 23

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic

oligonucleotide

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<210> 312  
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oligonucleotide

<400> 312  
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<210> 313  
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<400> 313  
ggtgcagata atgaaatggt ttgt 24

<210> 314  
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oligonucleotide

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oligonucleotide

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<210> 316  
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<210> 321  
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<210> 322  
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<220>  
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 oligonucleotide

<400> 322  
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<210> 323  
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<220>  
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<400> 323  
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<210> 324  
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<220>  
 <223> Description of Artificial Sequence: synthetic  
 oligonucleotide



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<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 325  caggctatac ccacaaggag att</p>	23
<p>&lt;210&gt; 326  &lt;211&gt; 22  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 326  tgттаatttt ggcttgatg tt</p>	22
<p>&lt;210&gt; 327  &lt;211&gt; 21  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 327  tcactccttt gcgcttatca a</p>	21
<p>&lt;210&gt; 328  &lt;211&gt; 20  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 328  agggctctat gtgccaaacc</p>	20
<p>&lt;210&gt; 329</p>	

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oligonucleotide

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23

<210> 330  
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oligonucleotide

<400> 330  
tgtaatccca ggtaagaaga aac

23

<210> 331  
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oligonucleotide

<400> 331  
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24

<210> 332  
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oligonucleotide

<400> 332  
ttctggcact cttcctcagg taac

24

<210> 333  
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oligonucleotide

<400> 333  
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<210> 334  
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<210> 335  
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oligonucleotide

<400> 335  
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<210> 336  
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<400> 336  
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<210> 337  
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oligonucleotide

<400> 337  
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<210> 338  
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oligonucleotide

<400> 338  
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24

<210> 339  
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oligonucleotide

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24

<210> 340  
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oligonucleotide

<400> 340  
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24

<210> 341  
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oligonucleotide

<400> 341  
aaatctttgc ktttatcact cagt

24

<210> 342  
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<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 342

tagtgcctgg ctttgtttta tgac

24

<210> 343

<211> 22

<212> DNA

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<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 343

cggatttggg aaagctgtct ct

22

<210> 344

<211> 24

<212> DNA

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<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 344

agagcacctt gaaggaaaca acaa

24

<210> 345

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 345

tccctcaact gagtacaga tagt

24

<210> 346

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<p>&lt;400&gt; 346  ataattgcgt tcttccccta ccc</p>	23
<p>&lt;210&gt; 347  &lt;211&gt; 19  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 347  aagccctggc accatcctg</p>	19
<p>&lt;210&gt; 348  &lt;211&gt; 20  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 348  tttgcaaaga aatgctatgt</p>	20
<p>&lt;210&gt; 349  &lt;211&gt; 22  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt;  &lt;223&gt; Description of Artificial Sequence: synthetic  oligonucleotide</p>	
<p>&lt;400&gt; 349  ctgggtaaca gacttcagta at</p>	22
<p>&lt;210&gt; 350  &lt;211&gt; 24  &lt;212&gt; DNA  &lt;213&gt; Artificial Sequence</p>	
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 aggatataat ttttggttca aca 23  
  
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         oligonucleotide  
  
 <400> 356  
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<210> 357  
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 <400> 357  
 accgtgggag cgtacagtca 20

<210> 358  
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 <400> 358  
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<210> 359  
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<210> 360

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 360

gagttccctt tttaggctgt tatt 24

<210> 361

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 361

tcttattgcc ttcattgatt tcta 24

<210> 362

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 362

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<210> 363

<211> 21

<212> DNA

<213> Artificial Sequence

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oligonucleotide

<400> 363

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<210> 364

<211> 21

<212> DNA  
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21

<210> 365  
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<400> 365  
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23

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<400> 366  
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21

<210> 367  
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<220>

<223> Description of Artificial Sequence: synthetic  
oligonucleotide

<400> 367  
ttaaatgagg catattcagt ctcc

24

<210> 368  
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oligonucleotide

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ggaagtggag tggggaagg 19

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<400> 370  
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24

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21

<210> 375  
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<400> 381  
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<210> 382  
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<400> 382  
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<210> 383  
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<400> 383  
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<210> 384  
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<400> 384  
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<210> 385  
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<400> 385  
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<210> 386

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<400> 386  
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22

<210> 387  
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<400> 387  
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22

<210> 388  
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<400> 388  
aagccatcat gtaaagtgaa aag

23

<210> 389  
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<400> 389  
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21

<210> 390  
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<400> 390  
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<210> 391  
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<400> 391  
tgagctgccca gggatgaattg 20

<210> 392  
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<400> 392  
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<210> 393  
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<400> 393  
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<210> 394  
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<400> 394  
cccgatgcga cccagttta 19



<210> 395  
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oligonucleotide

<400> 395  
tggaggggtt tgatgccata 20

<210> 396  
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<400> 396  
gatggatgcc cttcgaatac aga 23

<210> 397  
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<400> 397  
ttcccattha gtttgtcaat aatc 24

<210> 398  
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<400> 398  
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<210> 399  
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<210> 400

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<212> DNA

<213> Homo sapiens

<400> 400

caagataatg atgatgag

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<210> 401

<211> 15

<212> DNA

<213> Homo sapiens

<400> 401

caagatgatg atgag

15

<210> 402

<211> 13

<212> DNA

<213> Homo sapiens

<400> 402

tggtgtaagg tag

13

<210> 403

<211> 13

<212> DNA

<213> Homo sapiens

<400> 403

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<210> 404

<211> 17

<212> DNA

<213> Homo sapiens

<400> 404

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17

<210> 405

<211> 17

<212> DNA  
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<400> 405  
ccccttatay ctccaac 17

<210> 406  
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<400> 406  
aaatacgtaa tcgat 15

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<400> 407  
aaatacataa tcgat 15

<210> 408  
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<400> 408  
aaatacrtaa tcgat 15